

**HISTORICAL LESSONS FOR SQUADRON REVITALIZATION**

**BY**

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## **APPROVAL**

The undersigned certify that this thesis meets master's-level standards of research, argumentation, and expression.

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## **DISCLAIMER**

The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.



## **ABOUT THE AUTHOR**

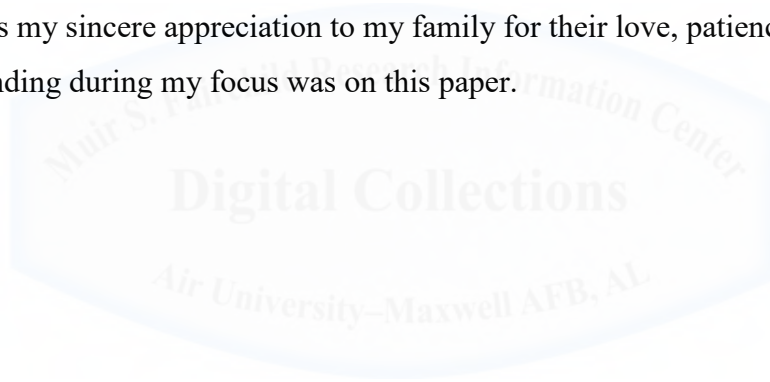
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## ABSTRACT

This study analyzes factors contributing to the accomplishments of highly successful USAF squadrons throughout history. The project examines the histories of seven highly successful squadrons of various types across 43 years of Air Force history. The study considers five basic factors (organization, leadership, manpower, OPTEMPO, and morale) to determine if they are necessary and sufficient for squadrons to be highly successful. The first three chapters each look at two award-winning squadrons from specific eras in USAF history: Cold War era in Chapter One, Post-Cold War but Pre-9/11 in Chapter Two, and Post-9/11 in Chapter Three. The study analyzes the five factors in each case and summarizes the findings by era. Chapter Four begins by analyzing the findings across the eras. The researcher then uses the analysis to predict the state of the five factors in a seventh and final case. The project concludes with a summary of the findings and the relationships between them, and implications for consideration.



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## INTRODUCTION

On 1 July 2016, Secretary of the Air Force (SECAF) Deborah Lee James swore in General David Goldfein as the 21<sup>st</sup> Chief of Staff of the Air Force (CSAF).

Approximately one month later, the general released the first in a series of short papers outlining his thinking on key focus areas. The new CSAF titled his first letter to Airmen *The Beating Heart of the Air Force... Squadrons!* In the letter, General Goldfein identifies squadrons as the United States Air Force's (USAF) most essential team and says that the Air Force will succeed or fail in its missions at the squadron level. The letter expresses concern over the degradation of squadrons' readiness over the last 15 years as the Air Force has focused almost singularly on countering violent extremism in the Middle East. The general specifically mentions manpower shortages, deployment and operations tempo (OPTEMPO), and morale as areas affecting unit readiness, and thus the Air Force's ability to succeed at its mission. General Goldfein's first focus area is the revitalization of squadrons. Revitalization will be successful when squadrons are "the cohesive, ready, and agile, fighting forces that the Air Force, Combatant Commanders, and the Nation Requires."<sup>1</sup>

### Assumptions and Research Question

This project explores the idea of revitalization by looking to history in an attempt to determine the necessary factors affecting highly successful squadrons in the past. This study makes three basic assumptions, first is that CSAF chose the term revitalize because he believes squadrons need to attain some attribute they once had. Second, that analysis of official unit histories can uncover the factors contributing to a squadron's success at a given point in time. The last assumption is that the Air Force has bestowed unit awards to highly successful squadrons. By making these assumptions, this study refines General Goldfein's focus area into the following research question: what factors have contributed to the accomplishments of highly successful USAF squadrons throughout history?

### Problem Background and Significance

The revitalization of squadrons is the first of three focus areas CSAF intends to improve by 2020. General Goldfein announced his second focus area in October of 2016

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<sup>1</sup> Gen David L. Goldfein, Chief of Staff of the Air Force, Letter to Airmen, 9 August 2016. (See Appendix A for full transcript).

under the title *Strengthening Joint Leaders and Teams*. This area addresses how the Air Force will present forces to Combatant Commanders and includes preparing Airmen to function in the role of Joint Task Force Headquarters.<sup>2</sup> CSAF released the third focus area, *Enhancing Multi-domain Command and Control...Tying It All Together*, on 10 March of 2017. The final focus area seeks to develop an advanced multi-domain operations concept.<sup>3</sup> These three areas complement current Air Force strategy laid out in the Strategic Master Plan and Air Force Future Operating Concept. Further, the focus areas are in line with Secretary James' priorities: taking care of people, balancing today's readiness with tomorrow's modernization, and making every dollar count.<sup>4</sup> At the time of this writing, Secretary James' tenure with the Department of the Air Force has concluded, but new priorities have not been set. CSAF believes that focus on these three areas will ensure the Air Force is ready for the next conflict. The Chief also intends the revitalization of squadrons to be the primary focus area through his first year ending summer of 2017.<sup>5</sup>

To date, CSAF has appointed general officers to lead teams designed to address each of the three focus areas. Secretary James has also initiated two programs intended to improve unit readiness programs that tie into General Goldfein's focus on squadron revitalization. She announced the first of these programs, reducing additional duties, in an email to the men and women of the Air Force on 19 August 2016. The challenge with additional duties concerns inflexible and arbitrary assignment of all 61 of them to virtually every unit in the Air Force. The Secretary sought to reduce the burden of the obligations by either eliminating specific duties Air Force wide, modifying and consolidating requirements so they only apply to units that require them, or by assigning the duty to Commander Support Staffs (CSS). Additionally, the letter says the Air Force is working to re-establish the CSS at the squadron level. The Secretary also requires Headquarters Air Force approval of future additional duties in an effort to prevent

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<sup>2</sup> Gen David L. Goldfein, Chief of Staff of the Air Force, CSAF Focus Area Document, October 2016. (See Appendix B for full transcript).

<sup>3</sup> Gen David L. Goldfein, Chief of Staff of the Air Force, Letter to Airmen, 10 March 2017. (See Appendix C for full transcript).

<sup>4</sup> Gen David L. Goldfein, Chief of Staff of the Air Force, Letter to Airmen, 9 August 2016.

<sup>5</sup> Gen David L. Goldfein, Chief of Staff of the Air Force, Letter to Airmen, 9 August 2016.

unchecked growth. By November 2016, this program reduced or eliminated 29 additional duties.<sup>6</sup>

Secretary James announced the second program in a memorandum for all Airmen emailed Air Force wide on 31 October 2016. This initiative aimed to reduce ancillary and computer-based training. The SECAF's team reviewed 42 specific courses accounting for 60 hours of training and surveyed 25,000 Airmen about ancillary training. In response, the Secretary eliminated 15 courses and streamlined 16 others by reducing frequency, shortening duration, or consolidating with other training. Additionally, Headquarters Air Force will provide oversight of ancillary and computer-based training requirements to prevent unnecessary growth. The SECAF intended these efforts to provide commanders more flexibility in completing their mission and allow Airmen to focus on their primary duties. The Secretary closed the memorandum with a promise to continue efforts towards taking care of people. Secretary James also mentioned that these two reduction efforts, additional duties and ancillary training, are critical to revitalizing squadrons.<sup>7</sup>

The former SECAF's efforts in these areas illustrate the unity and commitment of Air Force leadership to reinvigorating squadrons. They provide instant credibility to the cause and have immediate positive impacts on morale. At some point, there will be no aspects necessitating the top echelons of the Air Force to intervene directly. At that time, revitalization efforts will still need to continue. It is at the point when the Airmen and leaders serving in squadrons take over where the CSAF and SECAF have left off, that the findings of this study become most useful. Building the character of a squadron, much less every squadron, is an arduous task that requires the focus of every Airman. The author believes that leadership, education, and mentorship will be the long-term efforts required to carry the torch of revitalization beyond the instantly impactful labors the top echelon uses to break inertia and get the ball rolling toward success. The findings of this study hope to provide some insight into what we should be leading, educating, and mentoring towards in order to realize General Goldfein's goal.

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<sup>6</sup> Deborah L. James, Secretary of the Air Force, Memorandum for all Airmen, 18 August 2016.

<sup>7</sup> Deborah L. James, Secretary of the Air Force, Memorandum for all Airmen, 27 October 2016.

### **Limitations of the Study**

Meeting CSAF and the School of Advanced Air and Space Studies' timeline requires a limited scope for the project. This study, conducted at Maxwell AFB, leverages Air University's on-hand resources because they are not only adequate, but offer also economize the available time. The Air Force Historical Research Agency (HRA) maintains the archive of official unit histories for the USAF. The HRA is a readily available source of primary documentation and provides the bulk of the materials researched for this project. Because Air Force units compiled their official histories at, or near, real time, this project views them as being the most reliable and accurate sources available.

A self-imposed limitation is that the majority of information used to research this problem is in the form of official unit histories. In one case, the author conducted a short interview, but limited questions to match the information used in other cases. The opportunity to conduct the interview arose fortuitously, but the information sought clarified information from the official history. The author did not seek other interviews because of the time available and the method of determining cases for examination.

The research resulted in determination of specific cases for inclusion at various times throughout the project. To illustrate this point, initial efforts resulted in eight squadrons identified as prospect cases for chapter one. The author did not finalize decisions on which two cases to include in chapter one until completion of a document review at the HRA. Decisions on cases for subsequent chapters considered the types of squadrons included in previous chapters. In other words, the researcher did not decide which cases to include in chapter two until finalizing chapter one's cases. This method, coupled with project deadlines, prohibited the arrangement of other sources such as interviews of key personnel. The limitation to rely principally on official unit histories was self-imposed in order to maintain diversity of the squadron types chosen as cases and to meet external timelines.

The official historical documents themselves provided another limitation. In the 1960s, squadrons no longer produced unit histories, wings did. The majority of the cases studied were from 1979 and later. This limitation requires deeper analysis of the information available to understand squadron life. Further, the study used the official

histories as is, meaning with the exception of the one interview, this project accepts the information available in the document as ground truth. Because the Air Force does not require standardization of the information included in official histories, clarity on topics varies. In most cases, the material does not specifically answer the questions the study asks. The study analyzes raw data in order to construct an image that informs the intended output. To put it another way, this project seeks to converse with the official documents in order to reconstruct each unit from a specific point in history. The information available for each unit is unique requiring a different conversation with each.

### **Method**

The project starts by asking what units were likely to possess the desirable characteristics worthy of reinforcement in modern squadrons. To answer that question, the study relied on the third assumption listed above: that the Air Force has bestowed unit awards to squadrons displaying desirable characteristics. Generally, this project considers Air Force Outstanding Unit Award (AFOUA) and the Mackay Trophy as indicators of units that display desirable characteristics. There is a consideration for each award that requires additional scrutiny before the study considers a squadron as a prospect for inclusion as a case.

The SECAF awards the AFOUA to numbered Air Force units who have distinguished themselves above and apart from similar units.<sup>8</sup> The Air Force Personnel Center (AFPC) provides an online database to help determine what units SECAF awarded the AFOUA to and when. Whenever a unit earns the AFOUA, records may list subordinate units as winning the award as well. For instance, if 2d Bomb Wing earns the AFOUA, the 2d Security Forces Squadron may also show on the order for the award, but the significant achievement may not be directly attributable to the specific squadron. When asked, AFPC said they could not provide specific information regarding award narratives for this research. This project attempts to overcome this hurdle and research squadrons earning the award by reviewing other units awarded the AFOUA on the official order. When it appeared that the majority of the units in a squadron's wing also earned the award, the method rejected that squadron as a prospect. In one case, the study

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<sup>8</sup> Air Force Personnel Center, "Air Force Outstanding Unit Award," <http://www.afpc.af.mil/About-Us/FactSheets/Display/Article/421951/air-force-outstanding-unit-award/> (accessed 8 March 2017).

examines two squadrons from the same wing during the same timeframe. The study accepts this variation because the wing and all of its squadrons earned five consecutive AFOUAs. Additionally, two separate squadrons from the wing won consecutive Mackay Trophies. Based on the research conducted, the author is confident that the squadrons chosen were highly successful and worthy of study.

The USAF and the National Aeronautic Association award the Mackay Trophy for the most meritorious flight of the year by an Air Force person, persons, or organization.<sup>9</sup> A possible concern is that the Air Force often awards the trophy to individual aircrews. The two cases that used the Mackay Trophy as the indicator for inclusion in the project both list the squadron as a recipient. By scrutinizing the intended recipient of each award, the project is confident that the units chosen displayed characteristics the Air Force desired in its squadrons at the time of the award. The project ultimately examines seven cases comprised of three Mackay Trophy and four AFOUA recipients.

Originally, this study intended to use inductive logic to distill characteristics displayed by highly successful squadrons. While researching the cases, the methodology shifted to a deductive approach to determine if five factors were necessary and sufficient for a squadron to be successful. The five factors explored are leadership, organization and command relationships, manpower and personnel, OPTEMPO, and morale. The original inductive methodology used the factors as a framework for the research, providing symmetry between the chapters. The idea was that by focusing on factors that were generally important to squadrons, the research could distill unique characteristics from the unit histories. Instead, study of the historical documents revealed relationships between the factors and led to a shift in thought. How do organization, leadership, manpower, OPTEMPO, and morale contribute to a squadron's success?

The remainder of this writing refers to these as the five basic factors or five factors. The research examines these factors because of their importance to any organization and because CSAF and SECAF include them in correspondence on the focus area. In his letter regarding squadron revitalization, General Goldfein specifically

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<sup>9</sup> National Aeronautic Association, "Mackay Trophy," <https://naa.aero/awards/awards-and-trophies/mackay-trophy> (accessed 8 March 2017).



mentions manning, OPTEMPO and morale.<sup>10</sup> He also speaks of leadership in less direct terms. SECAF's intent to reinstate CSSs demonstrates willingness by top Air Force echelons to explore organizational solutions.

Organization, manning, and OPTEMPO relate to one another from a structural standpoint. The book *Reframing Organizations* offers four frames for analyzing and solving problems in organizations. The structural frame assumes that an organization can maximize performance by arraying personnel, and their roles, properly.<sup>11</sup> Manning and OPTEMPO are resources associated with humans and time respectively. Through a structural lens, organizations should manage the specialized skills of its people and divide labor appropriately.<sup>12</sup> This concept deals directly with the human and temporal aspects of manning and OPTEMPO, as well as their importance in organizational success. Additionally, the technical quality of USAF units makes the structural frame an appropriate point of view to analyze squadrons.<sup>13</sup> This project includes these factors because of the structural relationship between them, their suitability to analyzing technical organizations, and their consideration by senior Air Force leaders.

In the book *The Art of Wing Leadership*, Lieutenant Colonel John Zentner explains the relationship between leadership, morale, and success. Good leadership leads to good morale, good morale leads to success, and success reinforces good leadership.<sup>14</sup> Lieutenant Colonel Zentner's ideas were inspired by Colonel Dale Smith's 1951 article "What is Morale?" In Colonel Smith's efforts to define morale, he explains that when individual goals are part of organizational goals, morale is high.<sup>15</sup> The ideas of Colonels Smith and Zentner fit within a second frame from *Reframing Organizations*, the human resource frame. The human resource frame is appropriate for organizations where individual commitment and motivation is essential to success.<sup>16</sup> The individual commitment required by military service validates the use of human resource concepts in

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<sup>10</sup> Gen David L. Goldfein, Chief of Staff of the Air Force, Letter to Airmen, 9 August 2016.

<sup>11</sup> Lee G. Bolman and Terrence E. Deal, *Reframing Organization* (San Francisco, CA: Jossey-Bass, 2013), 45.

<sup>12</sup> Bolman and Deal, *Reframing Organizations*, 45.

<sup>13</sup> Bolman and Deal, *Reframing Organizations*, 311.

<sup>14</sup> Lt Col John J. Zentner, *The Art of Wing Leadership and Aircrew Morale in Combat: Air University CADRE Paper No. 11*. (Maxwell AFB, AL: Air University Press, 2000), 5.

<sup>15</sup> Col Dale O Smith, "What is Morale?" *Air University Quarterly Review* (Winter 1951-1952), 44.

<sup>16</sup> Bolman and Deal, *Reframing Organizations*, 311.

general, and the ideas of Colonels Smith and Zentner specifically. This project includes leadership and morale factors because of the existing military focus on them, their necessity in affecting change, and their mention in General Goldfein's letter.

The study uses organization charts and considers preceding or anticipated reorganizations to examine the state of the organization factor. The project examines manning in terms of numbers of personnel assigned and the appropriateness of the skill of assigned personnel. Manpower reports from official unit histories are the primary documents informing the manning factor. The study examines OPTEMPO in terms of the number of operations and exercises in which a unit participated. Chronologies from official unit histories provide insight into OPTEMPO. Some unit histories directly address morale, but others do not. The study uses direct reports on morale and considers other indicators such as awards and disciplinary actions. The study evaluates the status of the five basic factors in squadrons recognized at various points in Air Force history.

Chapters one through three look at two cases grouped into specific time categories. Chapter one examines squadrons earning awards during from the Cold War, specifically 1979 to 1981. Chapter two studies two squadrons earning awards between 1993 and 1995 during the period between the end of the Cold War and the terrorist attacks of 11 September 2001 (9/11). Chapter three focuses on units earning awards during combat operations in 2002. These chapters first describe the strategic environment of the era. Each chapter contains two sections that first examine the status of the five factors then analyzes the data to determine additional considerations contributing to success for a specific squadron. These chapters conclude with a comparison of the findings for each squadron and summarize the factors and considerations for the applicable era.

Chapter four compares the findings of chapters one through three in an attempt to identify common characteristics across the 23 years previously examined. Furthermore, the chapter makes additional comparisons by squadron type and by community the squadrons belonged to. The study then makes a prediction on the status of the five factors and additional considerations for a squadron from another historical era. The prediction considers the strategic environment and mission of the squadron. Chapter four then examines the official history of the 1960 Mackay Trophy winning squadron. A final



analysis comparing the findings to the prediction concludes the chapter. The project then explores implications of the findings and concludes with a summary. The following chapter begins the journey with a look at two AFOUA recipients during the Cold War.



## CHAPTER 1

### COLD WAR ERA

The first units explored in this project each earned the Air Force Outstanding Unit Award (AFOUA) between 1979 and 1980, while supporting very different missions. The first unit is a munitions maintenance squadron (MMS) in a bombardment wing (BMW) under the Strategic Air Command (SAC). The other unit is a transportation squadron (TRANSS) that was part of a tactical airlift wing (TAW) in the Military Airlift Command (MAC). The Air Force recognized both squadrons independent of their parent wings.

This era was during the transition from President Jimmy Carter to President Ronald Reagan. The Vietnam War had ended only seven years prior and the failed hostage rescue in Iran happened during this period. These were the waning years of the hollow force, which transformed into the Cold War winning force during the 1980s. Inflation had decreased the buying power of the dollar and its effects did not escape the military. Compounding the effects of inflation was President Carter's vow to cut the military budget by five to seven billion dollars in 1979.<sup>1</sup> The military was enacting resource conservation programs in an effort to stem the rising costs of energy. At Ellsworth Air Force Base (AFB), the creation of an energy conservation task group increased the number of additional duties personnel had to cope with.<sup>2</sup> At Pope AFB, gasoline had to be sold by the half gallon because the price of fuel had exceeded the maximum pricing capability of the base pumps.<sup>3</sup> Even in this austere environment, some units were able to excel.

This chapter, along with chapters two and three, explore two squadrons from different historical eras. Each chapter contains a separate section for each squadron examined. Each section first assesses how the five basic factors contributed to the squadron's success. Then each section analyzes the historical data to determine if any additional factors or characteristics were present. The chapter concludes by comparing the findings from each section and summarizing the findings for the historical era.

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<sup>1</sup> James Kitfield, *Prodigal Soldiers* (Washington, DC: Potomac Books Inc., 1995), 198.

<sup>2</sup> History, 28<sup>th</sup> Bombardment Wing, 1 July – 30 September 1979, 2.

<sup>3</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 30 June 1980, vi.

## **28th Munitions Maintenance Squadron**

The Air Force Personnel Services' awards database documents that the 28 MMS earned the AFOUA in 1981. Per the database, the period of the award was 1 July 1979 through 30 June 1980. According to official unit histories, 28 BMW submitted the award package by January of 1980. The squadron earned this award during this period; the parent wing did not. The 28 BMW's mission was "to develop and maintain the operational capability to permit the conduct of strategic warfare according to the emergency war order (EWO). To this end, the 28 BMW was equipped with two squadrons of B-52H heavy bombers, one air refueling squadron using KC-135A aircraft, and one PACCS squadron (Post Attack Command and Control System). The PACCS mission added a unique feature to the 28 BMW, as this was the only bombardment wing in the Air Force to be so equipped."<sup>4</sup>

### **Organization**

The 28 BMW at Ellsworth AFB, South Dakota was subordinate to the 4th Air Division (AD) F.E. Warren AFB, Wyoming, Fifteenth Air Force (AF) at March AFB, California, and Strategic Air Command (SAC) at Offutt AFB, Nebraska. The 28 BMW had no internal support functions beyond a wing headquarters squadron (28 WHS) and relied on its hosting wing, the 44th Strategic Missile Wing (SMW), to provide security, civil engineering, transportation, services, supply, and transportation support to 28 BMW. The 2148th Communications Squadron, of the Air Force Communications Service, provided communications support for the base.<sup>5</sup> To accomplish its mission, the 28 BMW had nine squadrons: four operational squadrons organized under a deputy wing commander for operations, four maintenance squadrons organized under a deputy commander for maintenance, and 28 WHS. There were no groups subordinate to the 28 BMW. The 28 MMS's primary customers were the 37th and 77th Bombardment Squadrons (BS), both operating B-52H aircraft.

The 28 BMW had an additional level of leadership, 4 AD, not seen in current Air Force structure. This additional headquarters level provided the benefits and hurtles associated with an additional layer of bureaucracy. There were no groups within the

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<sup>4</sup> History, 28<sup>th</sup> Bombardment Wing, 1 July – 30 September 1979, 1.

<sup>5</sup> History, 28<sup>th</sup> Bombardment Wing, 1 July – 30 September 1979, 6.

wing, squadrons organized under deputy wing commanders, and the wing did not have its own organic support elements. The project assumes the organizational structure was stable and provided adequate support to the 28 BMW and 28 MMS missions.

### **Leadership**

Leadership in the 28 BMW and its subordinate units experienced some turnover, but overall was a source of stability. The 28 BMW Commander (CC) assumed command in March of 1979, the 28 BMW vice commander (CV) in August of 1979, and the deputy commander for maintenance (DCM) in December of 1979. The 28 MMS/CC took command in August of 1979. As of March 1980, these leaders were still on the job. The outgoing DCM and 28 MMS/CC had each only been in their positions for approximately 10 months before departing. Both officers assumed command of other units immediately following, indicating no reason to assume poor leadership. Officers with broad experiences, including combat in Vietnam, held leadership positions in the 28 BMW. Most outgoing leaders moved into positions of greater responsibility.<sup>6</sup> Overall, the study rates leadership factors as a positive for 28 MMS.

### **Manpower and Personnel**

Overall, manpower assigned to the 28 BMW hovered around 100 percent of manpower authorized. Officer strength was stable around 107 percent with a trend of slowly closing on 100 percent. The numbers of enlisted personnel fluctuated, but overall the numbers were trending downward. The wing had between 94 and 98 percent of authorized enlisted personnel assigned.<sup>7</sup> The 28 BMW enjoyed employment rates greater than 100 percent of the 18 authorized civilian positions. In spite of resource constraints, the wing was able to over-hire civilians for increased work during the winter months.<sup>8</sup> The 28 MMS maintained between 99 and 105 percent of authorized personnel assigned, averaging better than other maintenance squadrons.<sup>9</sup> In short, personnel rates in the 28 BMW were near 100 percent, but experiencing a downward trend. The maintenance

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<sup>6</sup> Adapted from Biographical Data Sheets in Vol. 2 of each 28<sup>th</sup> Bombardment Wing History, 1 July 1979 – 31 March 1980.

<sup>7</sup> Adapted from Chapter II – Personnel of each 28<sup>th</sup> Bombardment Wing History, 1 July 1979 – 31 March 1980.

<sup>8</sup> History, 28<sup>th</sup> Bombardment Wing, 1 January – 31 March 1980, 12.

<sup>9</sup> Adapted from Chapter II – Personnel of each 28<sup>th</sup> Bombardment Wing History, 1 July 1979 – 31 March 1980.

community had the lowest rates in the wing. The 28 MMS fared better than any other maintenance squadron. See Table 1 for specific numbers.

**Table 1: 28 BMW Manpower Figures**

Unit	Officer Authorized /Assigned	Enlisted Authorized /Assigned	Total Authorized /Assigned
<b>September 1979</b>			
28 BMW	461/492	1722/1647	2183/2139
28 MMS	7/10	301/317	308/327
Other Mx Sqs	14/13	1100/996	1114/1009
<b>March 1980</b>			
28 BMW	460/489	1714/1654	2174/2143
28 MMS	8/9	295/294	303/303
Other Mx Sqs	14/16	1100/1014	1114/1030

*Source: Adapted from strength reports in 28 Bombardment Wing histories 1 July – 30 September 1979 and 1 January – 31 March 1980.*

## **OPTEMPO**

The 28 BMW and its squadrons experienced a high OPTEMPO. Beyond normal nuclear alert and training operations, the 28 BMW participated in numerous higher headquarters directed missions, exercises, evaluations, inspections, and competitions.<sup>10</sup> Key events between July of 1979 and March of 1980 included an emergency war order exercise, a weapon loading competition, an operational readiness inspection (ORI) with a concurrent no-notice deployment, multiple bombing competitions, and numerous staff assistance visits. Day-to-day requirements increased when SAC added a requirement for contingency training, a new conventional mission for the wing's B-52s.<sup>11</sup> It is worth mentioning that any inspection, exercise, or competition or program increasing demand on the wing's B-52s had a similar effect on the maintenance complex in general and the munitions squadron specifically. Additionally, the 28 BMW completed an ORI in April of 1979 and was preparing for another in April of 1980. OPTEMPO was high for the members of the 28 BMW and 28 MMS.

## **Morale**

Morale is a difficult area to assess, but the 28 BMW histories include some useful indicators. In September of 1979, the Commander in Chief of SAC (CINCSAC) visited the 28 BMW to discuss personnel and money. During his closing remarks, CINCSAC

<sup>10</sup> Adapted from Chronology and Chapter I – Wing Status of each 28<sup>th</sup> Bombardment Wing History, 1 July 1979 – 31 March 1980.

<sup>11</sup> History, 28<sup>th</sup> Bombardment Wing, 1 January – 31 March 1980, Supporting Document 2.

expressed concern with retention and drug use and ordered squadron commanders to place an emphasis on these areas.<sup>12</sup> By March of 1980, the 28 BMW experienced a 25 percent increase in unfavorable information files (UIF). The increase in disciplinary action was due to a deliberate campaign by 28 BMW leadership to crack down on discipline issues.<sup>13</sup> Additionally, 4 AD conducted a survey aimed at identifying irritants and improving retention. The survey identified the same five irritants at all three participating bases: additional duties, the promotion system, pay and allowances, alert duties, and the personnel reporting system.<sup>14</sup>

The enlisted personnel section of each history reported heavy workloads as having negative effects on retention. The maintenance community specifically felt the workload and retention issues due to having the lowest manpower rates in the wing.<sup>15</sup> The 4 AD survey indicated there was displeasure with the administrative system and alert duties. Increased OPTEMPO, decreased manpower, and increased disciplinary actions exacerbated the division's concerns in the 28 BMW. Morale across the 28 BMW was low. The unit's OPTEMPO, manpower, and leadership affected morale. No single factor sufficiently explains either low morale or unit success. The interplay between them is the most likely explanation for the poor morale.

### **Summary**

In summary, four of the five basic factors were sufficient for the 28 MMS to succeed at achieving its mission. Leadership and organization were capable providing adequate guidance and support. Personnel rates, while declining, remained at 99% and above during the period. OPTEMPO was high, but should not have overstressed units of 28 BMW. Morale was the only apparent problem area for 28 MMS. So how was the 28 MMS able to stand above the remainder of the 28 BMW in late 1979? There are two factors that helped: the 28 MMS' role in the new contingency mission area and effective communication.

The December 1979 ORI occurred in conjunction with a no-notice deployment and earned the 28 BMW an outstanding rating, as the SAC inspector general graded both

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<sup>12</sup> History, 28<sup>th</sup> Bombardment Wing, 1 July – 30 September 1979, 5.

<sup>13</sup> History, 28<sup>th</sup> Bombardment Wing, 1 January – 31 March 1980, 20.

<sup>14</sup> History, 28<sup>th</sup> Bombardment Wing, 1 January – 31 March 1980, 26.

<sup>15</sup> Adapted from Chapter II – Personnel of each 28<sup>th</sup> Bombardment Wing History, 1 July 1979 – 31 March 1980.

the ORI and the deployment.<sup>16</sup> The deployment portion required conversion of the wing's bombers to carry conventional munitions, a first for the B-52H. No technical data existed for the conversion; the 28 MMS had to create it. This event marked the beginning of a non-nuclear requirement for the B-52H. The 28 MMS personnel helped write the technical data, train aircrews on the weapons, and train other SAC units how to convert B-52Hs for conventional use.

The conversion of nuclear bombers for conventional weapons delivery was a change in mission for the 28 MMS. The new mission offered unique challenges as well as tangible goals. As 28 MMS crews met challenges, their progress toward reaching unit goals was easy to observe. The personnel of the 28 MMS took pride in their accomplishments.<sup>17</sup> Although morale was low across the wing, the maintainers working directly toward this goal probably felt an increased sense of motivation. Where morale is a collective feeling about the achievement of organizational goals, motivation is more of an individual rationale based on cost-benefit concepts.<sup>18</sup> In short, there is a direct relationship between morale and motivation, improvement of one has a similar effect as improvement in the other.<sup>19</sup> The increased motivation for 28 MMS personnel appeared to provide an effect similar to high morale.

Because motivation rationales are cost-benefit based, transactional leadership techniques can result in higher motivation. The wing, AD, numbered air force (NAF), SAC, and Air Force headquarters all recognized the 28 MMS' efforts with awards at the individual, team, and unit level. Awards provide a source of extrinsic motivation. A behaviorist approach to leadership believes rewarding desired behavior results in continuation of the behavior. This is true as long as the rewards continue.<sup>20</sup> When morale is low, transactional methods may provide an avenue to break inertia and get movement in the right direction. Over the long run, sustaining success requires addressing morale problems.

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<sup>16</sup> History, 28<sup>th</sup> Bombardment Wing, 1 October – 31 December 1979, 63-65.

<sup>17</sup> History, 28<sup>th</sup> Bombardment Wing, 1 October – 31 December 1979, Supporting Document 91.

<sup>18</sup> Lt Col John J. Zentner, *The Art of Wing Leadership and Aircrew Morale in Combat: Air University CADRE Paper No. 11*. (Maxwell AFB, AL: Air University Press, 2000), 12-13.

<sup>19</sup> Zentner, *The Art of Wing Leadership*, 12-13.

<sup>20</sup> Edward L. Deci and Richard Flaste, *Why We Do What We Do*. (New York, NY: Penguin Group, 1995), 17-18.



The key enabler in translating unit goals into a source of motivation for 28 MMS personnel was communication, both receiving and transmitting. From a receive standpoint, squadron leadership had to understand the state of morale or they could not have developed a solution. Receiving information also considers how new information is handled. It is conceivable that the leadership of a squadron having trouble would not welcome new tasks from higher headquarters. In this case, it appears that the 28 MMS leadership saw the new mission as an opportunity to find success. On the transmit side, leaders communicated the task to the squadron as an opportunity with clear goals, and the unit responded well. Leadership recognized the efforts and communicated the successes up the chain in the form of formal award nominations. Higher echelons rewarded the 28 MMS's behavior with formal recognition, resulting in the increased motivation described above. In this way, both the new mission and the ability to communicate helped the 28 MMS become highly successful in late 1979.

### **317th Transportation Squadron**

The Air Force Personnel Service's awards database indicates the 317 TRANSS earned the AFOUA for the period of April 1980 through May 1981. The Air Force awarded the parent unit, the 317 Tactical Airlift Wing (TAW), the AFOUA for a similar period, June 1979 through May 1981; however, the Air Force published the 317 TRANNS' award on a different order number. Unit histories do not shed light on why there is a time difference, but it is reasonable to believe both units gained recognition for separate actions during a similar timeframe. The 317 TAW's mission was "to be prepared, when required, to airlift United States forces and their equipment and supplies and insert them into battle by means of airdrop and airland. The Wing must also be capable of aerially resupplying them as necessary...The location of Pope Air Force Base, adjacent to Fort Bragg, home of XVIII Airborne Corps, and the John F. Kennedy Center for Military Assistance, is especially well suited to preparation for the tactical mission. In addition to training for the wartime mission, the Air Force tasked the 317 TAW with routine transportation of the men and material needed to support America's worldwide military obligations. Finally, the Wing is often called upon to assist in humanitarian relief missions."<sup>21</sup> The 317 TRANSS mission was "to insure the

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<sup>21</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 1.

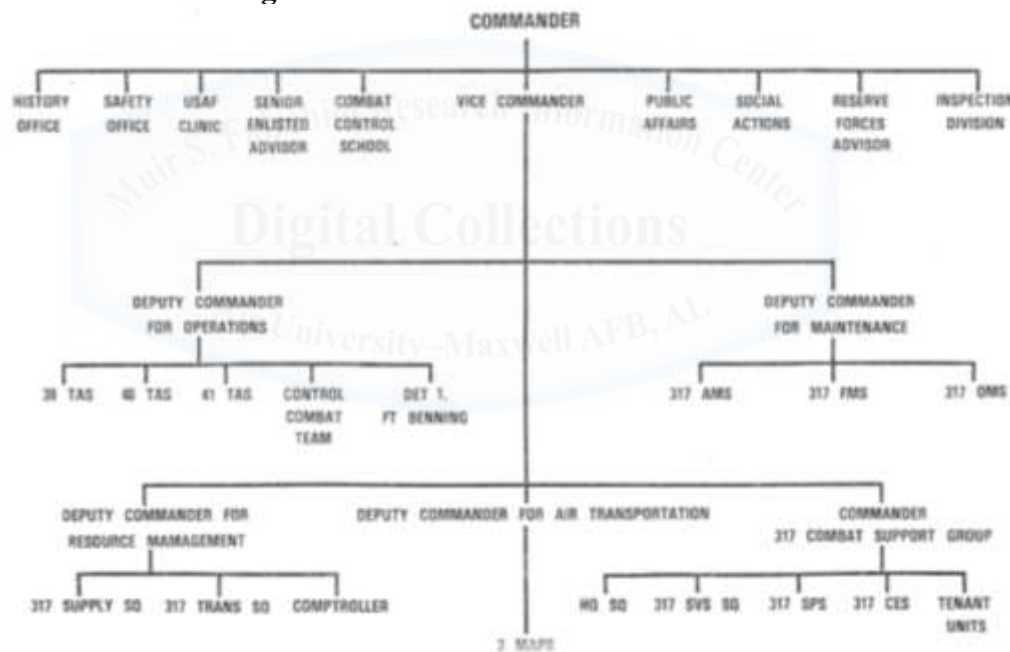


availability of personnel, equipment and facilities of Air Terminal, Vehicle Operations, Maintenance, and Packaging and Crating Branch to all organizations within the 317 TAW.”<sup>22</sup>

## Organization

The 317 TAW at Pope AFB, North Carolina was subordinate to 21AF at McGuire AFB, New Jersey and MAC at Scott AFB, Illinois. In addition to supporting its internal squadrons, 317 TAW also supported 11 tenant units, 7 external organizations, Fort Bragg’s airborne mission, and the new Joint Special Operations Command (JSOC). In April of 1980, the 317 TAW reorganized deactivating its two groups and implementing a tri-deputy structure plus a CSG as depicted in Figure 1. The three deputy commanders were for operations, maintenance, and resource management.<sup>23</sup>

**Figure 1: 317 TAW Organization Chart**



Source: *History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 30 June 1980, Appendix 5.*

The 317 TRANSS reported to the Deputy Commander for Resource Management (DCRM). Although 317 TRANSS’ mission statement includes air terminal services, the squadron lacked the capability organically. The 317 TRANSS did not have an air terminal section in its organization. The 3d Mobile Aerial Port Squadron (3 MAPS)

<sup>22</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 July – 31 December 1980, Supporting Document 19.

<sup>23</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 30 June 1980, 4.

operated 317 TAW's terminal.<sup>24</sup> The 317 TRANSS's lack of aerial port services posed a risk to the mission because 3 MAPS was a deployable unit. If the 3 MAPS were to deploy, 317 TAW would not have sufficient port capability. The study will address this concern in greater detail later in this section. The 317 TRANSS's organization was not advantageous for the success of the installation it supported.

### **Leadership**

Leadership in the 317 TAW experienced rapid turnover of the wing CC and CV. Three different colonels served in each position during the 18-month period researched.<sup>25</sup> The histories show that the turnover was due to promotions, indicating experienced leaders performing well. The two outgoing wing CCs were each promoted to brigadier general. Turnover for the deputy commanders occurred less frequently. After serving nearly four years in the position, the DCRM retired in 1981. The 317 TRANSS had a change of command in June of 1981 with the Assistant DCRM becoming the new commander.<sup>26</sup> It is possible that the frequent turnover at the senior levels of command and stagnation at the DCRM could have resulted in a change resistant organization. After the new DCRM and squadron commander were in place, changes to the management of the aerial port occurred. The 317 TRANSS commander understood how the aerial port arrangement could negatively affect the mission, and had the vision for a permanent solution. Overall, leadership was a positive factor for 317 TRANSS.

### **Manpower and Personnel**

Assigned personnel remained steady throughout the period with about 3,300 personnel assigned to the 317 TAW and 138 assigned to the 317 TRANSS. The records do not provide information comparing the numbers of personnel authorized to the numbers of personnel assigned. There are only two areas mentioning manpower as being problematic, civilian personnel and the 317 TRANSS. Civilian personnel rates fell to 96 percent during a hiring freeze in early 1981 associated with policies of President

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<sup>24</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 53.

<sup>25</sup> Adapted from Chapter I – Wing Status of each 317<sup>th</sup> Tactical Airlift Wing History, 1 January 1980 – 30 June 1981.

<sup>26</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 31 March 1981, Supporting Documents 3 and 4.

Reagan's new administration. Once the administration lifted the freeze, civilian personnel numbers quickly rebounded.<sup>27</sup>

The number of personnel assigned to 317 TRANSS was not adequate for it to meet the traditional mission requirements of transportation squadrons in mobility wings. The 3 MAPS provided the 317 TAW, and Pope AFB, with some of the aerial transportation services usually provided by transportation squadrons.<sup>28</sup> The documents did not address how or why 317 TAW decided to operate in this manner. The study cannot rectify if there was a manpower shortage, or a lack of personnel with the proper skills. Regardless of the background, the arrangement appears to have been a cogent choice. The manpower issue relates to the organization problem discussed above. The study considers the manpower and personnel factor as a problem for 317 TRANSS.

### **OPTEMPO**

Day-to-day operations at Pope AFB were very busy due to regular support to MAC's transport requirements and the demands to support airborne operations at Fort Bragg. Pope AFB also experienced very high rates of visiting units and VIPs. Other TAWs used Pope AFB regularly for exercises and ORIs due to the proximity of drop zones and assault strips at Fort Bragg.<sup>29</sup> Additionally, JSOC recently activated on Fort Bragg and increased requirements for the 317 TAW in the form of sustained support for six dedicated aircraft.<sup>30</sup> JSOC's presence also increased the number of high profile visitors to Fort Bragg and Pope AFB, seeing over 30 visitors in the 18 months researched. Visitors included the Secretary of Defense and Secretary of the Air Force.<sup>31</sup> Each additional demand on the wing increased demand on the 317 TRANSS in both air terminal and vehicle operations. OPTEMPO for the 317 TAW and the 317 TRANSS was very high. The OPTEMPO likely drew attention away from the aerial port concerns. Because the arrangement with 3 MAPS was working, the need to provide a long-term solution probably seemed like it could wait. The study considers OPTEMPO as a contributing factor to the organization problems of 317 TRANSS.

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<sup>27</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 30 June 1980, 60.

<sup>28</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 53.

<sup>29</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 31 March 1981, 53.

<sup>30</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 31 March 1981, 13.

<sup>31</sup> Adapted from Chronologies of each 317<sup>th</sup> Tactical Airlift Wing History, 1 January 1980 – 30 June 1981.

## **Morale**

As with the information reported for personnel rates, indicators of morale give very little baseline information for comparison. Morale and welfare services, available to wing personnel, represent most of the information regarding morale in the records. These services included a library, officers' mess, a childcare center, youth center, recreation center, recreation supply rental, and a gym.<sup>32</sup> In the second half of 1980, the personnel affairs office began a program that flew personnel to the Air Force Museum at Wright-Patterson AFB. The intent was to maintain high morale and increase retention.<sup>33</sup> Several items mentioned indicate high morale. Administratively, the wing was enjoying successful on-the-job training upgrades of 90 percent and personnel reports had an on-time rate of 97 percent.<sup>34</sup> Additionally, the results of a 1980 survey administered across Pope AFB conveyed a positive attitude about the base and mission by the base population.<sup>35</sup> The final indicator of positive morale was the successful integration of male and female personnel in the base dormitories showing outstanding ratings on monthly dorm inspections after the integration.<sup>36</sup> The only negative indicator toward morale was a drunk driving crash that killed two Airmen and injured a third.<sup>37</sup> Although neither outright statements of unit morale nor detailed disciplinary information is available, this study views morale as a positive factor for the 317 TAW and the 317 TRANSS.

## **Summary**

The state of the five basic factors gives little explanation for the success of the 317 TRANSS in the early 1980s. The squadron's organization did not include the Pope AFB aerial port, but arrangements were in place allowing the 3 MAPS to cover the duties. Wing leadership was highly qualified, but turned over rapidly while leadership in the resource management branch was somewhat stagnant. The leadership environment may have been resistant to changing an arrangement between the 317 TRANSS and the 3 MAPS that was meeting the immediate needs of the wing. Manpower was inadequate;

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<sup>32</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 60.

<sup>33</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 July – 31 December 1980, vii.

<sup>34</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 61.

<sup>35</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 July – 31 December 1980, 37.

<sup>36</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 61.

<sup>37</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 July – 31 December 1980, 25.

the 317 TRANSS did not have enough personnel to meet the transportation needs of Pope AFB. OPTEMPO was very high possibly reinforcing resistance to change. There were no documented concerns over morale for the 317 TRANSS or its parent wing. The 317 TRANSS found success because its leadership understood how the current aerial port arrangement was unsustainable over the long run, developed a plan to correct it, and was able to grow its organization in a fiscally constrained environment.

Pope AFB was the busiest aerial port in the Air Force because it supported Fort Bragg's airborne mission. The division of air terminal services between the 317 TRANSS and the 3 MAPS allowed the 317 TAW to meet the demands of its very high OPTEMPO. The primary mission of the 3 MAPS was to deploy on short notice to support tactical airlift operations during wartime contingencies.<sup>38</sup> Additionally, the 3 MAPS was not manned beyond other aerial ports and therefore had no ability operate the port at Pope AFB and a deployed location simultaneously.<sup>39</sup> In other words, if the 3 MAPS were to fulfill its primary mission, the 317 TAW would not be able to fulfill theirs. The wing histories do not explain why the 3 MAPS took charge of Pope AFB's aerial port. A possible scenario could be that at a previous point, decision makers chose to use 3 MAPS as a stopgap solution to growing aerial port demands at Pope AFB. The measure's intent may not have been to be permanent, but it ran the risk of remaining in effect until a failure occurred. The regular turnover of wing leadership and high OPTEMPO may have contributed to the duration of the stopgap measure.

To solve this problem, the 317 TRANSS proposed a squadron reorganization that would increase unit manpower and allow aerial port operations to continue at Pope AFB regardless of the 3 MAPS's deployment status. By June of 1981, MAC had approved the reorganization and efforts were underway to realize it.<sup>40</sup> The 317 TRANSS had the vision to recognize there was a problem, find a solution, and communicate up the chain of command. The squadron was successful because it was able to convince higher echelons to provide resources and implement its solution before a failure could occur.

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<sup>38</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 55.

<sup>39</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 January – 31 March 1981, 52-53.

<sup>40</sup> History, 317<sup>th</sup> Tactical Airlift Wing, 1 April – 30 June 1981, 53.

## **Conclusion**

Extreme fiscal austerity characterized the years between 1979 and 1981. In the two cases studied, neither squadron enjoyed the full benefit of the five basic factors. The 28 MMS had the resources it needed, but lacked high levels of morale. The 317 TRANSS did not have the resources it needed to complete its mission. In spite of this, both squadrons were able to find ways to not only excel at their mission, but provide meaningful improvement to greater Air Force capabilities. The 28 MMS innovated the methods necessary to meet its new conventional mission and paved the way for the entire B-52H fleet to become the most versatile and longest serving fleet in the Air Force. The 317 TRANSS identified a problem that could cause a mission failure, developed a solution, and was able to gain additional resources from higher echelons of command. In both cases leadership factors, specifically communication, were instrumental in squadron success.

Communication requires two channels, transmit and receive, and two directions, up and down the chain of command. The 28 MMS used both channels effectively in both directions to both motivate its personnel and provide information up the chain about the successes of its efforts. In turn, higher echelons of command provided formal recognition and award to the 28 MMS providing further motivation. The 317 TRANSS's efforts demonstrate effective communication up the chain. It is likely that the squadron's solution could have met with resistance until a catastrophic failure happened. Convincing leaders up the chain to reorganize the busiest aerial port in the Air Force and provide more personnel must have been challenging, especially given that the current arrangement was working. The 317 TRANSS's success suggests that its leadership were highly skilled communicators.

The cases from this chapter reinforce the importance of the basic factors in general, and the role of leadership specifically. In unique ways, the leaders of the two squadrons were able to recognize that their units lacked in at least one of the basic factors. The 28 MMS was able to increase individual motivations extrinsically to provide effects similar to high morale. The 317 TRANSS was able to improve its situation with regards to organization and manpower. The situational awareness and communication skills of these units' leaders demonstrate the importance of strong leaders with the proper

education and training. Table 2 provides a summary of the Cold War Era findings. See Appendix D for a summary of all finding and an explanation of summary coding.

**Table 2: Summary of Cold War Era**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
Cold War						
28 MMS						Mission and Communication
317 TRANSS						Vision and Communication

*Source: Author's Original Work*





## **CHAPTER 2**

### **POST-COLD WAR, PRE-9/11 ERA**

This chapter examines two award-winning squadrons from 1993-1995. The first is a specialized squadron, part of a direct reporting unit (DRU) in Air Mobility Command (AMC) that earned an AFOUA. The other is a bomb squadron, part of an objective wing in Air Combat Command (ACC), which received the 1995 Mackay Trophy. These units received their awards independently from their parent organizations.

This era was between the end of the Cold War and the terrorist attacks of September 11, 2001. Since the time of the previous chapter, the US military increased in size, the Berlin Wall fell, and the Soviet Union disintegrated. The US liberated Kuwait from Iraqi occupation and the US became the lone superpower. The US military in general was downsizing and the Air Force sought to lessen the effects by eliminating unnecessary layers of authority under the objective wing concept.<sup>1</sup> Once streamlining of bases and large units took place, focus shifted to smaller institutions like DRUs and centers. Major organizational changes, aimed at achieving an overall smaller force, were a hallmark for the Air Force at this time.

#### **1st Combat Camera Squadron**

The Air Force awarded the AFOUA to the First Combat Camera Squadron (1 CTCS) for the period of 1 July 1993 to 30 June 1995. The parent unit, Air Combat Camera Service (AIRCCS) did not receive an AFOUA for this period. 1CTCS was a tenant unit at Charleston AFB. The 1 CTCS's mission was to "Maintain, train and equip both ground and aerial qualified combat documentation forces for deployment in exercises, contingencies, and war at various levels. These Combat Camera forces were organized based on Unit Tasking Codes, and committed to the theater commands in their particular areas of responsibility."<sup>2</sup>

The Air Force deactivated the AIRCCS on 1 October 1994, and as a result, no historical record for 1 CTCS exists beyond this date within the award period. AIRCCS was a DRU and organized its histories differently than the other documents researched in this study. AIRCCS was a relatively small unit and included more specific and

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<sup>1</sup> Air Force Historical Research Agency, "A Guide to United States Air Force Lineage and Honors." <http://www.afhra.af.mil> (accessed 13 March 2017).

<sup>2</sup> History, Air Combat Camera Service, 1 January – 31 October 1994, 4.

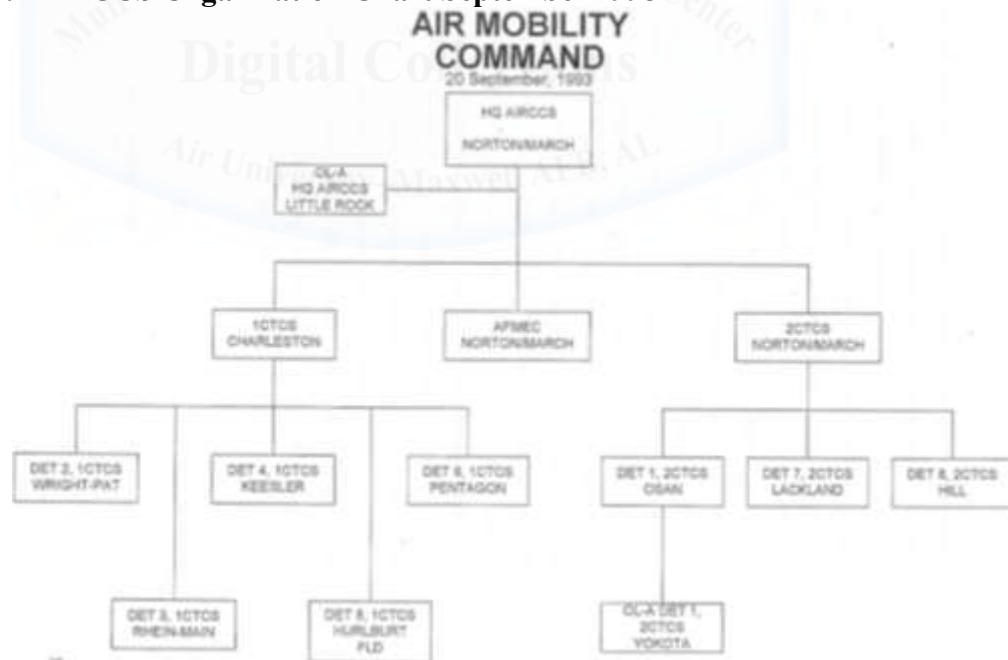


personalized information in its histories. The narrative formats omit some details such as dates and support received, but do provide a good feel for the pulse of the service and its subordinate units. The historical documents reveal that the five areas studied did not directly lend themselves to 1 CTCS's success.

## Organization

The award period was one of change and uncertainty for AIRCCS and its subordinate units. Activated in April of 1992, the AIRCCS replaced the Aerospace Audiovisual Service's 83 units with 14.<sup>3</sup> AIRCCS had two squadrons, the Air Force Media Center (AFMEC) and an operating location in Little Rock Arkansas, as its subordinate units. Each squadron had multiple geographically separated detachments (see Figure 2). 1 CTCS's area of responsibility was Europe and Africa. The 2 CTCS focused on Asia and the Pacific. The two squadrons shared responsibility for the continental United States and the Middle East. Each unit and detachment was a tenant on their assigned base and received supported from the host unit.

**Figure 2: AIRCCS Organization Chart September 1993**

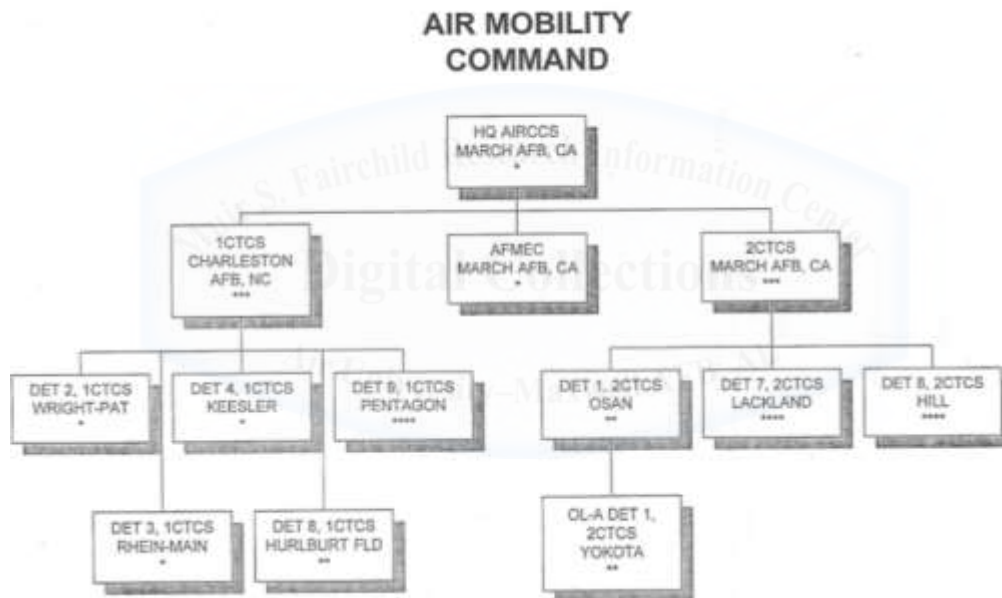


Source: History, Air Combat Camera Service, 1 January – 31 December 1993, 3.

<sup>3</sup> History, Air Combat Camera Service, 1 January – 31 December 1993, 10.

By January of 1994, the Operating Location in Arkansas inactivated, and even greater changes were on the horizon (see Figure 3). On 1 July 1994, the day after the award period ended, both CTCSSs realigned and no longer reported to AIRCCS. Squadrons consolidated and inactivated their detachments. Due to ongoing operations in Europe, Detachment three of 1 CTCSS remained in operation until 30 September 1994. The Air Force officially inactivated AIRCCS and AFMEC on 30 September 1994. As of 1 July 1994, the Combat Camera squadrons were subordinate to Air Mobility Operations Groups (AMOG) at Travis AFB and McGuire AFB. Instead of direct tasking of Combat Camera to AMC, the chain of command went from AMC to a NAF to the AMOG then the CTCSS (See Figure 4).

**Figure 3: AIRCCS Organization Chart January 1994**

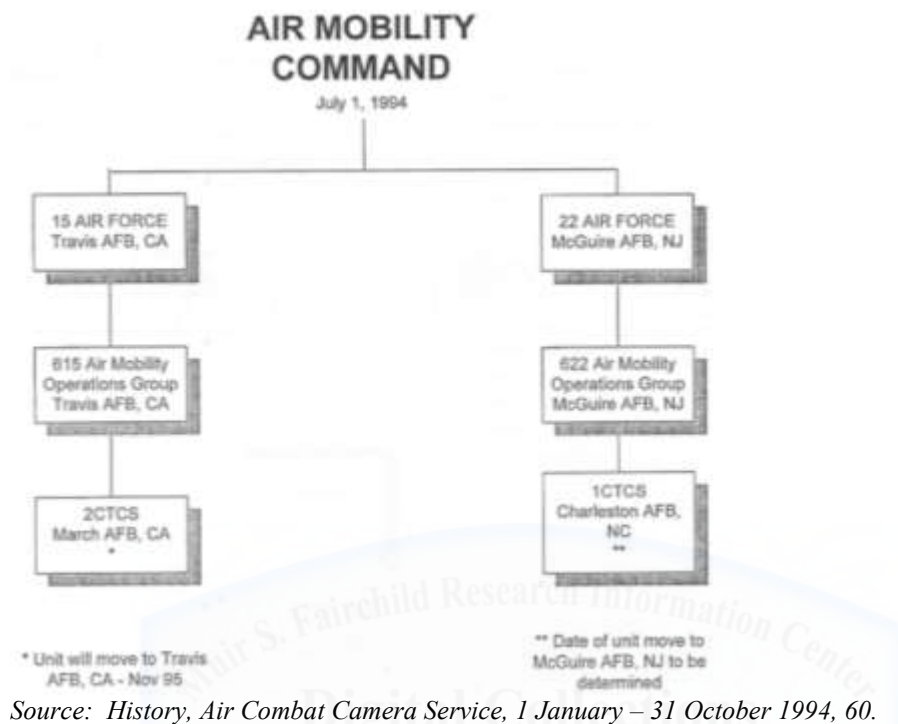


*Source: History, Air Combat Camera Service, 1 January – 31 October 1994, 58.*

The Combat Camera squadrons were subordinate to AIRCCS for 27 months. AIRCCS underwent multiple reorganizations in that time and deactivated three months later. Both squadrons absorbed regional responsibilities that had fallen under multiple detachments. The shifting organizational structure was a source of instability for the 1 CTCSS during the award period. By diverting attention of 1 CTCSS personnel from the mission to the concerns of reorganization, organizational instability was a source of friction. The challenges brought on by the reorganization of units and the chain of

command created turmoil within the units and, as a result, the successes of the 1 CTCS are not attributable to organizational factors.

**Figure 4: CTCS Reorganization October 1994**



## Leadership

Of the five focus areas, leadership offers the best explanation for 1 CTCS's achievements. The AIRCCS Commander was in place for the duration of the unit's existence. The AIRCCS Commander had experience leading at multiple echelons and had combat experience in the 1991 Gulf War as a provisional wing commander. The commander was a mobility pilot by trade, but his extensive leadership gave him credibility. His broad base of education and experience prepared him well for the unique challenges of leading a DRU in AMC. The 1 CTCS had a change of command in June of 1994, just before it realigned from AIRCCS to the AMOG. The new commander ascended from commanding one of 1 CTCS's detachments.<sup>4</sup>

For AIRCCS, the continuity provided by a single commander offered a much-needed source of stability. The critical timing of 1 CTCS's change of command, just

<sup>4</sup> Adapted from Chapter I: Mission and Organization of each Air Combat Camera Service History, 1 January 1993 – 31 October 1994.

before a major reorganization, could have had a negative effect on the unit. Promoting the new commander from within the organization likely offset the stress associated with adapting to a new leader. Because the leadership change maintained a degree of continuity, the leadership environment likely did not add to the friction caused by the organizational upheaval of AIRCCS. The reorganization however, may have caused problems regarding manpower.

### **Manpower and Personnel**

On the surface, personnel numbers appeared to be in good shape. The AIRCCS and its units had nearly 100 percent of authorized personnel assigned (See Table 2). Under further scrutiny, these rates were not as adequate as they appeared. When AIRCCS stood up in 1992 it had 745 personnel assigned, less than one-third of the personnel authorized to its predecessor.<sup>5</sup> Under the July 1994 realignment, the Combat Camera Squadrons would each have 150 total personnel with no detachments. Due to the inactivation of the detachments, the 1 CTCS covered the same area of responsibility with 79 fewer personnel.

**Table 3: AIRCCS Manpower Figures**

Unit	Officer Auth/Asgn	Enlisted Auth/Asgn	Civilian Auth/Asgn	Total Auth/Asgn
HQ AIRCCS	8/7	7/8	18/17	33/32
AFMEC	2/2	38/33	78/62	118/95
1 CTCS*	9/9	75/79	3/2	87/90
2 CTCS	12/13	87/91	6/6	105/110
*1 CTCS detachments had an additional 140 personnel assigned				

*Source: Adapted from History, Air Combat Camera Service, 1 January – 31 December 1993, 105.*

All units in AIRCC reported they required additional manpower to support their mission.<sup>6</sup> In spite of maintaining nearly 100% of authorized personnel, 1 CTCS had inadequate manpower. Each realignment resulted in less manpower available to 1 CTCS to meet its mission. Manning was an additional source of friction compounding the issues caused by organizational instability. The July 1994 organizational realignment resulted in even fewer personnel available to cover ongoing operations in Europe and Africa.

<sup>5</sup> History, Air Combat Camera Service, 1 January – 31 December 1993, 10-12.

<sup>6</sup> History, Air Combat Camera Service, 1 January – 31 October 1994, Supporting Document I-3.

## **OPTEMPO**

The 1 CTCS had an extreme OPTEMPO in the mid-1990s. In addition to routine support to units in the eastern half of the continental United States, Combat Camera also supported contingency operations in Somalia, Egypt, and Rwanda. The 1 CTCS's area of responsibility included combat operations over the Balkan peninsula as well. Combat Camera personnel maintained a rotational deployment to Italy in order to document Operation Provide Promise, which later became Operation Deny Flight.<sup>7</sup> Demands on Combat Camera, especially in 1 CTCS's area of responsibility, resulted in an OPTEMPO that added stress and friction to the organization and its personnel. The extreme OPTEMPO may have contributed to 1 CTCS's success by providing high profile opportunities for recognition. Given the organizational and manpower concerns, the OPTEMPO was not sustainable and detracted from the unit's morale.

## **Morale**

The 1994 history officially records morale in the 1 CTCS as good overall. Many other statements regarding morale indicate otherwise. The same document that reports morale as good provides no examples of positive morale. It also includes a list of challenges to morale and closes by saying "they have responded very well under the circumstances."<sup>8</sup> Morale was an area of concern for AIRCCS as well. In a January 1994 memorandum, the AIRCCS Commander addressed his subordinate units regarding rumors, confusion, and great stress on AIRCCS personnel. The commander admonishes those involved with rumors as doing great harm and attempts to ease the concerns of personnel who are unsure about their future employment.<sup>9</sup> Additionally, both Combat Camera Squadrons reported that the realignment would inhibit unit performance, render them ineffective, and cost prohibitive.<sup>10</sup> In spite of the official statement, the study considers morale factor a negative for 1 CTCS. The looming reorganization caused most of the areas affecting morale for both 1 CTCS and AIRCCS.

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<sup>7</sup> Adapted from Chapter II: Operations and Training of each Air Combat Camera Service History, 1 January 1993 – 31 October 1994.

<sup>8</sup> History, Air Combat Camera Service, 1 January – 31 October 1994, Unnumbered Annex.

<sup>9</sup> History, Air Combat Camera Service, 1 January – 31 October 1994, Supporting Document I-4.

<sup>10</sup> History, Air Combat Camera Service, 1 January – 31 October 1994, Supporting Document I-3.

## **Summary**

Organizational instability was the primary friction point for 1 CTCS in 1993 and 1994. Manpower, OPTEMPO, and morale concerns compounded to worsen the situation. Organizational restructure is a necessary part of military bureaucracy. In spite of the friction organizational instability caused, 1 CTCS overcame. The only factor thus far mentioned as having any positive effect was leadership. While leadership can help keep the unit pointed in the right direction, it is unlikely that leadership alone explains the success of 1 CTCS. Processes deeply engrained in the squadron's culture provide the best explanation of how the 1 CTCS was able to find success.

Organizations exist to create some type of output; that is the unit's mission. The standard patterns of behavior by which the organization functions to accomplish the mission is its process.<sup>11</sup> If an organization's process is adequate, and the people of the organization execute the process, then the organization can continue its mission. The 1 CTCS's mission was the documentation of combat and contingency operations. The AIRCCS official histories document the adequacies of 1 CTCS's processes in the discussion of nearly every operation. The concerns over organizational instability, manpower, OPTEMPO, and morale could have distracted 1 CTCS's personnel from accomplishing its mission. Instead, the ability to excel at its mission speaks to the quality of the squadron's processes. Additionally, the fact that the personnel continued to execute the process indicates that the process had coalesced into the culture of the unit. Mature processes deeply engrained in the organization's culture provided 1 CTCS the resilience it needed to overcome its lack of four of the basic factors.

## **9th Bomb Squadron**

The 9 BS earned the Mackay Trophy for the most meritorious flight of 1995. On 2 June 1995, two B-1Bs circumnavigated the globe in 36 hours and 13 minutes setting records for the longest non-stop B-1B flight. The flight also set world speed records for around the world and for around the world eastbound, flight with in-flight refueling. The purpose of the mission was "to demonstrate the B-1B's global combat capability by bombing in both the eastern and western hemisphere test ranges, during the same

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<sup>11</sup> Graham Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis* (New York, NY: Addison Wesley Educational Publishers Inc., 1999), 143.

mission, proving the Air Force will be the first to the fight, no matter where the conflict, and to establish two new around-the-world speed records.”<sup>12</sup>

This instance of the Mackay Trophy recognizes both the aircrews that participated in the flight, but also the 9 BS.<sup>13</sup> During the period, the 9 BS belonged to the 7 WG at Dyess AFB, Texas. The historical record covering the date of the flight exists as one record with eleven volumes covering the period from when the wing stood up on 1 October 1993 through 30 June 1995. Although the record lacks information regarding unit morale, Retired Colonel Stephen Wright, who took command of the 9 BS on 26 June 1995, was available for an interview and shed some light on the state of morale at the time. The data indicates that the five focus areas provided some hurdles for 9 BS to overcome in the mid-1990s.

### **Organization**

On 30 September 1993, Dyess AFB was home to two wings, the 96 WG of ACC operating B-1B aircraft and the 463rd Airlift Wing (AW) of AMC operating C-130s. At the time, 7 WG’s predecessor, 7 BW, was an ACC unit operating B-52Hs at Carswell AFB Texas. On 1 October 1993, the 7 WG moved to Dyess AFB with no personnel or equipment. On the same day, the 96 WG and 463 AW inactivated and the three wings consolidated under the Air Forces Objective Wing Concept of “One Base One Boss.”<sup>14</sup> The merger of the three wings resulted in an ACC wing with both combat and mobility assets assigned. The 7 WG’s mobility and combat missions required some modifications to the Objective Wing Concept. The most notable change was the inclusion of a planning division, XP, in the wing staff. Figure 5 shows the 7 WG organizational structure as of 1 October 1994.

The decision to merge the three wings minimized overhead by consolidating under a single wing and commander at a single location. The merger made sense with regards to the Air Force goal of downsizing for the post-Cold War world, but created some unique challenges. The mixing of mobility and combat forces under a single wing muddled command relationships for tasking forces. The wing fell under ACC, but

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<sup>12</sup> History, 7<sup>th</sup> Wing, 1 October 1993 – 30 June 1995, Supporting Document 475.

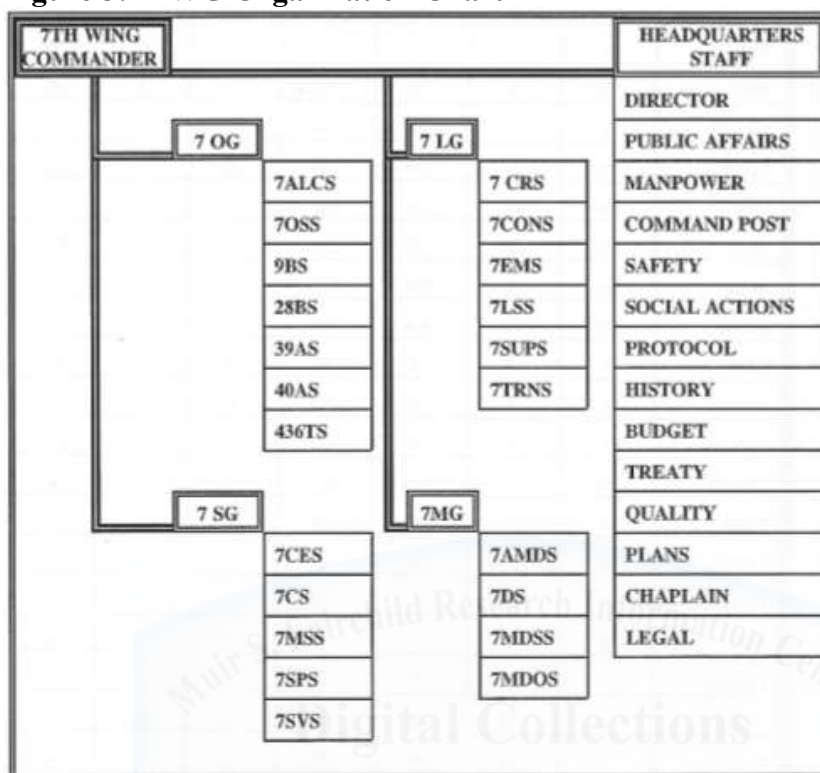
<sup>13</sup> National Aeronautic Association, “Mackay Trophy,” <https://naa.aero/awards/awards-and-trophies/mackay-trophy> (accessed 8 March 2017).

<sup>14</sup> History, 7<sup>th</sup> Wing, 1 October 1993 – 30 June 1995, 13.



bomber tasks came through ACC and airlift came via AMC channels. The 7 WG's structure did an adequate job of overcoming this obstacle.

**Figure 5: 7 WG Organization Chart**



Source: *History, 7<sup>th</sup> Wing, 1 October 1993 – 30 June 1995, 49.*

The new structure at Dyess AFB was unique and may have initially provided some challenges for 7 WG's subordinate units. The historical document indicated no specific problems for flying units. Additionally, the 9 BS's meritorious flight took place almost a year and a half after the reorganization. By this time, it is likely that the wing developed new processes and had them in place long enough to minimize any friction caused by the reorganization. The study therefore assesses an adequate level of organizational support and stability for the 9 BS in 1995.

### Leadership

The area of leadership appears to be another area of mixed effects for 9 BS. Wing leadership likely had a positive influence and squadron leadership a negative one. The commanders of the two wings that resided on Dyess AFB formed the leadership team for the new 7 WG. The 96 BW/CC, a brigadier general, became the 7 WG/CC and the 463 AW/CC, a colonel, became the 7 WG/CV. In August of 1994, the 7 WG/CC



position changed over, both the incoming and outgoing 7 WG/CCs had previously commanded two other wings.<sup>15</sup> Placing the top leaders under the previous structure to the top positions under the new structure provided stability for the 7 WG during its transition. The depth of experience of the wing command team was an additional benefit.

Leadership in the 9 BS may have provided less benefit to its unit. There was a rift between mid-level officers and the squadron commander.<sup>16</sup> An example of how this rift manifested itself exists related to the award-winning flight. The aircrews and maintainers of the 9 BS developed the initial concept for the mission. At first, the 9 BS/CC was not supportive of the concept. The idea for the mission gained support from higher echelons of leadership, became a reality, and the 9 BS/CC personally led the mission. Some of the mid-level officers resented the squadron commander for first resisting the mission, and then leading it.<sup>17</sup> The study does not intend this example to cast fault on the 9 BS/CC or the personnel of the 9 BS. The example illustrates that the command climate at the time of the sortie was not entirely conducive to the success of the 9 BS. The data suggests that the positive aspects of senior leadership and negative aspects of squadron leadership were somewhat offsetting. Leadership was a reason either for or against the success of the 9 BS in 1995.

### **Manpower and Personnel**

Manpower appears to be a positive aspect for the 9 BS. In December of 1993, personnel rates for the wing were over 95% for 7 WG and 100% for 9 BS. By 1994, units stopped reporting number of personnel assigned, but the total number authorized slightly increased by June of 1995. See Table 3 for specific numbers. Based on the percentage of personnel assigned in 1994, the modest growth of authorized personnel in 1995, and the absence of information in the record indicating inadequate manpower, this project asserts manpower benefited the 9 BS.

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<sup>15</sup> History, 7<sup>th</sup> Wing, 1 October 1993 – 30 June 1995, 17-32.

<sup>16</sup> Col Stephen E. Wright, interview by the author, 1 February 2017.

<sup>17</sup> Col Stephen E. Wright, interview by the author, 1 February 2017.

**Table 4: 7 WG Manpower Figures**

Unit	Officer Auth/Asgn	Enlisted Auth/Asgn	Civilian Auth/Asgn	Total Auth/Asgn
7 WG Dec 1993	618/625	3903/3759	375/343	4896/4727
9 BS Dec 1993	60/83	268/266	0/0	328/349
7 WG Jun 1995*	654	3938	347	4939
9 BS Jun 1995*	74	280	0	354
*Numbers are authorized personnel				

*Source: History, 7<sup>th</sup> Wing, 1 October 1993 – 30 June 1995, 50-52.*

## **OPTEMPO**

Having adequate personnel was necessary to keep up with a high OPTEMPO. As a new unit, 7 WG's initial exercise and inspection schedule was busy. Once the wing and its units had passed an initial operational readiness inspection, visits from the inspector general decreased but support for exercises and contingencies increased.<sup>18</sup> OPTEMPO was high for the 7 WG and 9 BS through 1995. The record does not indicate at any point where OPTEMPO had an adverse effect on any aspect of wing or squadron operations. This study assumes that OPTEMPO provided a level of stress that encouraged high performance and likely acted as a source of extrinsic motivation.

## **Morale**

The official history contains virtually no information regarding morale in the 7 WG or 9 BS. Colonel Wright, who served as the 9 BS Commander starting in June of 1995, stated that his impression of unit morale was that there were areas of concern, but he expected this of a unit the size of 9 BS.

At the time, the 9 BS contained both operations and maintenance personnel making it a very large squadron. There were two problem areas worth mentioning. The first regarded a rift between some of the junior aircrew members and the former squadron commander previously mentioned. The other was the fact that a newly arrived chief master sergeant was under investigation by the Office of Special Investigations. When Colonel Wright assumed command, his first few weeks were tumultuous, but the environment quickly settled down. The new leadership had contained the areas of

<sup>18</sup> History, 7<sup>th</sup> Wing, 1 October 1993 – 30 June 1995, 17-37.

concern without inhibiting the orderly operation of the unit. Colonel Wright found the majority of the unit worked hard and had a fair to good state of morale.<sup>19</sup>

The rift between aircrew members and the squadron commander indicate that morale was a problem area for 9 BS leading up to its award-winning mission. The morale problems did not reach the point of inhibiting unit success. New leadership quickly resolved the concerns indicating a relationship between the two factors. Overall, it appears none the five factors directly explain the 9 BS's success. Organizational structure had recently changed, but enough time had passed to adapt to the environment. Squadron leadership was an area of concern, but wing leadership had the experience necessary to offset it. Wing leadership also provided a source of stability during the reorganization. Manpower and OPTEMPO were both assets to squadron and wing operations. The study considers morale as a problem area, but the real issue was the relationship between morale and leadership. According to a study on wing leadership by Lieutenant Colonel John Zentner, good leadership leads to good morale, good morale leads to good performance, which enhances the perception of good leadership. Figure 6 graphically represents the cyclic relationship between leadership, morale, and performance.<sup>20</sup> If this model is accurate, how did the 9 BS overcome less than optimal leadership and morale to achieve success?

**Figure 6: Model of Unit Success**



*Source: Zentner, the Art of Wing Leadership, 5.*

### **Summary**

According to Colonel Wright, the most remarkable characteristic of the 9 BS was the cohesion among the mid-level personnel, the captains and non-commissioned

<sup>19</sup> Col Stephen E. Wright, interview by the author, 1 February 2017.

<sup>20</sup> Lt Col John J. Zentner, *The Art of Wing Leadership and Aircrew Morale in Combat: Air University CADRE Paper No. 11*. (Maxwell AFB, AL: Air University Press, 2000), 5.

officers. The idea of cohesion among a certain group inside the squadron is different from the traditional concepts of unit morale. In this case, unit morale is a measure of the squadron's confidence as a whole. Figure 6 shows that high unit morale requires extrinsic motivators of good leadership and organizational success. Because these extrinsic motivators were deficient, intrinsic factors provided a likely substitute. The primary factors that drive intrinsic motivation are a sense of purpose, self-direction, and mastery.<sup>21</sup> The resentment toward squadron leadership felt by the mid-level personnel explains why it is likely they possessed a sense of purpose and self-direction. In addition, the mid-level personnel are the technical experts of any unit, satisfying the factor of mastery. Intrinsic motivations provided the cohesion among the squadron's mid-level experts. This motivation and its driving factors surrogated the role of formal leadership and enhanced the relationship between leadership factors and unit morale in Figure 6's model of unit success.

## **Conclusion**

Sweeping organizational changes across the Air Force characterized the mid-1990s. These changes intended to reduce the size of the military in response to the end of the Cold War. While the shifts and reductions were necessary to meet political guidance, they created turbulence and friction for many Air Force organizations and personnel. Reviewing two highly successful units from this era shows how cultural factors stood out as primary contributors to organizational success.

For 1 CTCS, mature processes deeply engrained in the unit's culture enabled them to overcome friction induced by organizational instability, insufficient manpower, extreme OPTEMPO, and low morale. For 9 BS, intrinsic motivation created cohesion among a substantial portion of the squadron. This core of like-minded professionals surrogated good leadership and unit morale to find success. Neither of these cases provides an absolute model for emulation by future squadrons. What they do provide are clear examples of characteristics units should possess in order to succeed when reality makes traditional methods unattainable. When people-centric factors of climate are poor, strong operational centric factors of culture must be able to compensate. These two cases

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<sup>21</sup> Mathew J. Bonnot, "Organizational Culture and Climate." (lecture, Army Command and General Staff College, Fort Leavenworth, KS, 19 September 2015).

provide concrete evidence that squadrons with deeply engrained cultures of resilience can not only overcome adverse climates, but also excel in them. Table 5 provides a summary of the Cold War Era findings. See Appendix D for a summary of all finding and an explanation of summary coding.

**Table 5: Summary of Post-Cold War, Pre-9/11 Era**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
Post-Cold War/Pre-9/11						
1 CTCS						Process
9 BS						Motivation and Cohesion

*Source: Author's Original Work*



### **CHAPTER 3**

#### **POST-9/11 ERA**

This chapter explores two award-winning squadrons from the 16th Special Operations Wing (SOW) of Air Force Special Operations Command (AFSOC) during the period of July 2001 to June 2002. The 16th Special Operations Squadron (SOS), an AC-130H squadron, earned the 2002 Mackay trophy. The 16th Aircraft Generation Squadron (AGS) was a maintenance unit supporting three aircraft types operated by three different squadrons of the 16 SOW and won the AFOUA. The Air Force also awarded the AFOUA to the 16 SOW and its subordinate units during this period; 16 AGS earned the award on the same order number as part of the 16 SOW.

To this point, this project has avoided studying squadrons awarded the AFOUA on the same order as their parent organization. The Air Force awarded the AFOUA to many units while beginning the Global War on Terrorism, limiting the number of squadrons meeting the previous criteria. Additionally, so many units earned the AFOUA that the AFPC awards database could not sort or display all the winners. The 16 SOW had a history of outstanding service including six consecutive AFOUAs covering 10 years, two awards with valor. Additionally, squadrons within 16 SOW won back-to-back Mackay Trophies in 2001 and 2002. The author of this study is confident that any squadron of the 16 SOW during this time was an outstanding unit and a worthy candidate for this project. The study explores 16 AGS because of their direct support of three operations squadrons, including 16 SOS, and their selection as the maintenance effectiveness award winner in 2001.

The project examines the official histories of the 16 SOW from July 2001 through June of 2002. Study of this period is important because it was a transitional period from peacetime to war. The attacks of 11 September 2001, the subsequent rescue and recovery operations, and the initiation of combat operations in Afghanistan occurred during this timeframe. The Battle of Tora Bora and Operation Anaconda both took place during this period, both supported by units of 16 SOW. The period of study ended before the start of combat operations in Iraq.

The official history provided no formal mission statement for 16 SOS. A statement from a 20 June 2002 end-of-tour report from 16 SOS/CC echoed the wing's

mission of organizing, training, and equipping gunships for combat operations. Additionally, 16 SOS/CC mentioned innovating technology and equipment to send forward to the fight.<sup>1</sup> The 16 AGS primary mission involved generating and recovering the assigned fixed wing aircraft both at home station and deployed locations.<sup>2</sup> The mission of the 16 SOW was “to organize, train, and equip United States Air Force special operations forces for global employment. The wing continued to focus squarely on unconventional warfare, including counterinsurgency and psychological operations during low intensity conflict.”<sup>3</sup>

## **Organization**

The 16 SOW had seven SOSs operating nine different aircraft and organized under a modified version of the objective wing structure adding an information operations function as a wing agency (Figure 7).<sup>4</sup> In 2001, the CSAF directed a logistics review to reorganize wing structures from the objective wing to the combat wing. The reorganization required five changes: 1) Create the Logistics Readiness Officer (LRO) career field; 2) Assign all aircraft and space maintenance personnel serving in Operations Groups (OG) and Logistics Groups (LG) to Maintenance Groups (MXG); 3) Merge supply and transportation squadrons into Logistics Readiness Squadrons (LRS); 4) Place logistics plans into the LRS; 5) Place LRS, Contracting Squadron, and Aerial Port Squadron into the existing Support Group (SG) and rename it Mission Support Group.<sup>5</sup> The new organizational structure (Figure 8) had initial operation capability by 1 October 2002.<sup>6</sup>

Organization specifics for the 16 SOS are not available. Organization of support and maintenance functions benefited 16 SOS’s mission. The reorganization had very little effect on the operational squadrons. The 16 AGS consisted of a central supervisory element and three Aircraft Maintenance Units (AMU) generating three different aircraft types (Figure 9). The pending reorganization affected the 16 AGS, but the actions required predominately consisted of changing the unit name and conducting two

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<sup>1</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Document 43.

<sup>2</sup> History, 16<sup>th</sup> Special Operations Wing, 1 July – 31 December 2001, 61.

<sup>3</sup> History, 16<sup>th</sup> Special Operations Wing, 1 July – 31 December 2001, 1.

<sup>4</sup> History, 16<sup>th</sup> Special Operations Wing, 1 July – 31 December 2001, 4-5.

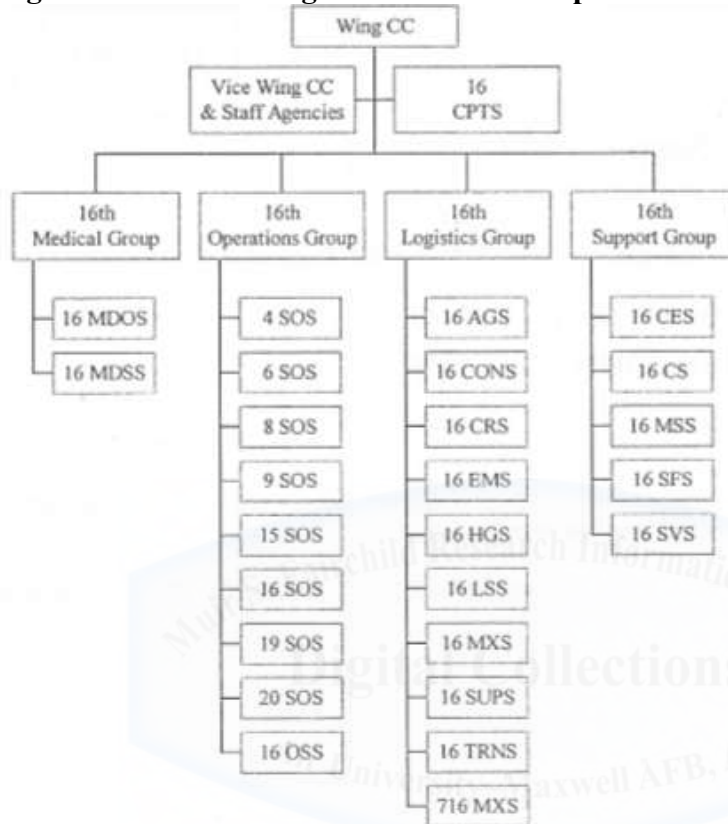
<sup>5</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, 47.

<sup>6</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, 52.



equipment account transfers.<sup>7</sup> The requirements of the reorganization added a degree of stress to the 16 AGS, but it was not extensive. Overall, the study assesses organizational factors as neither benefiting nor hindering 16 AGS.

**Figure 7: 16 SOW Organization Chart September 2002**



*Source: History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, 50.*

## Leadership

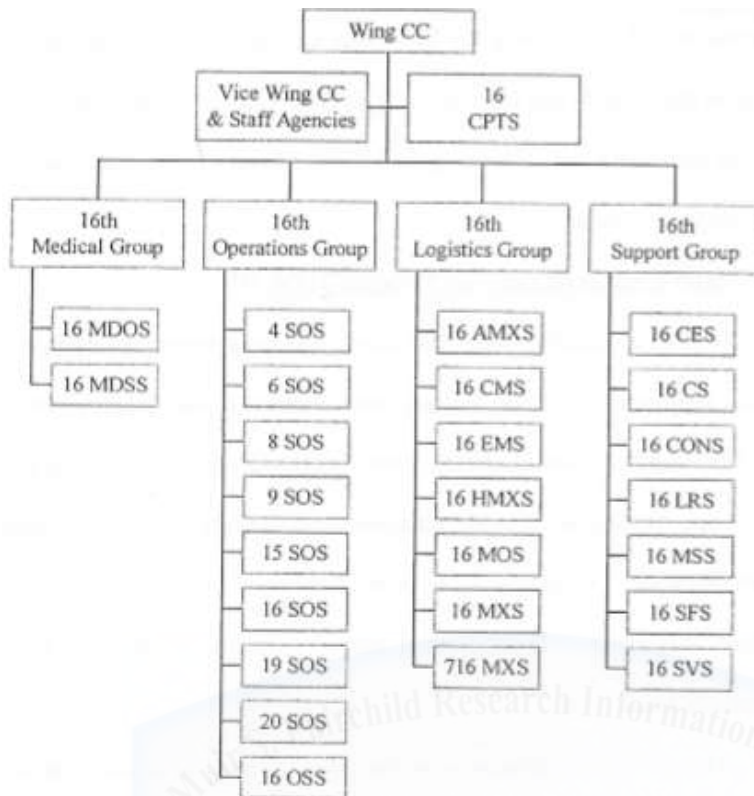
Leadership in the 16 SOW likely had a positive influence on the wing and its subordinate units. The command team wing commander, vice commander, and command chief master sergeant all assumed their positions in June of 2001. The wing commander transitioned out in June of 2002 and the 16 OG/CC assumed command of 16 SOW providing a degree of continuity. Several squadrons within the wing also promoted leaders from within.<sup>8</sup>

<sup>7</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Document 105.

<sup>8</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, 1.

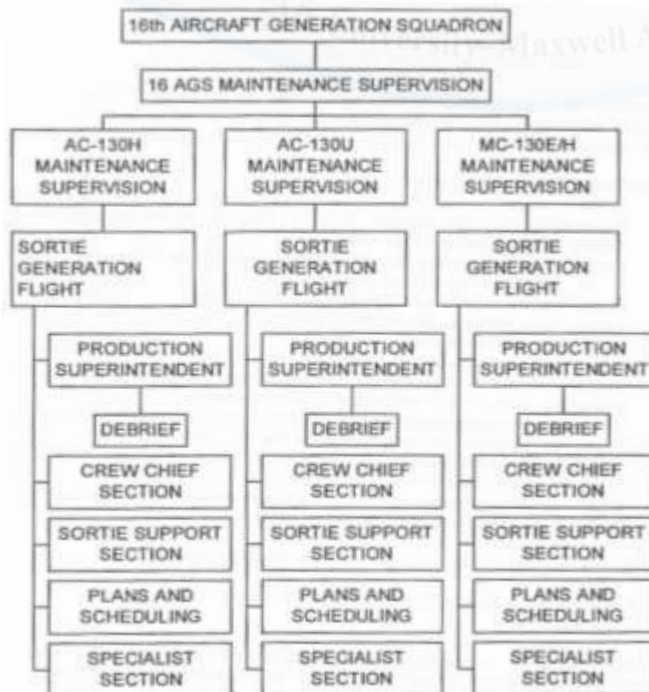


**Figure 8: 16 SOW Organization Chart October 2002**



Source: History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, 52.

**Figure 9: 16 AGS Organization Chart September 2002**



Source: History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Document 105.

Both 16 SOS and 16 AGS had changes of command in summer of 2001, before the start of combat operations. The commanders of both squadrons formally recognized the efforts and success of the units and their personnel. The 16 SOS/CC formally recorded his unit's accomplishments in reports and award nominations.<sup>9</sup> The 16 AGS/CC wrote an exhaustive award nomination resulting in the squadron winning the 2001 Maintenance Effectiveness Award.<sup>10</sup> Leadership factors were beneficial to the success of both squadrons and the wing. Commanders demonstrated the ability to communicate the successes of their personnel up the chain of command earning recognition for their units and validating their accomplishments.

### **Manpower**

Manpower was a positive area for the wing and both squadrons, all maintaining over 90% of authorized personnel between July of 2001 and June of 2002. Both 16 SOW and 16 AGS had greater than 100 percent personnel assigned; 16 SOS had greater than 90 percent. All three organizations saw an increase in the number of assigned personnel in 2002. See Table 4 for specific numbers. The historical record only indicates that nearly half of the 16 AGS's personnel were relatively inexperienced apprentices, holding three skill levels.<sup>11</sup> No other manpower concerns were present in the record. The study proposes that manpower was a resource that benefited both squadrons and contributed to their success.

**Table 6: 16 SOW Manpower Figures**

Unit	Officer Auth/Asgn	Enlisted Auth/Asgn	Civilian Auth/Asgn	Total Auth/Asgn
16 SOW Dec 2001	706/683	4881/4913	368/376	5955/5972
16 SOW Jun 2002	698/701	4840/5115	392/433	5930/6249
16 SOS Dec 2001	62/57	117/106	1/1	180/164
16 SOS Jun 2002	62/62	117/110	1/1	180/173
16 AGS Dec 2001	8/9	687/718	1/1	696/728
16 AGS Jun 2002	8/9	687/760	1/1	696/770

*Source: Adapted from strength reports in 16 Special Operations Wing histories 1 July – 31 December 2001 and 1 January – 30 June 2002.*

<sup>9</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Documents 43, 44, and 53.

<sup>10</sup> History, 16<sup>th</sup> Special Operations Wing, 1 July – 31 December 2001, Supporting Document 157.

<sup>11</sup> History, 16<sup>th</sup> Special Operations Wing, 1 July – 31 December 2001, Supporting Document 157

## **OPTEMPO**

OPTEMPO for 16 SOW and its units was very high. The nature of special operations creates a high demand for few resources in periods of relative peacetime. 16 SOW units experienced heavy operational commitments in 2001 and 2002.<sup>12</sup> The Global War on Terrorism after the attacks of 11 September 2001 was an irregular conflict with an emphasis, on special operations, especially during initial efforts. Increased wartime demand for special operations drove OPTEMPO to even higher levels for 16 SOS and 16 AGS. Because 16 SOW normally operates at a high OPTEMPO in peacetime, the demands placed on it may have been less adverse than for a conventional unit.

Because the period analyzed is early in the war, this project assumes that OPTEMPO positively affected 16 SOS and 16 AGS. Conventional wisdom dictates that too high of an OPTEMPO can negatively affect a unit's morale. In this case, the OPTEMPO increase had a clearly discernable reason that most service members identified with. Because of the circumstance, the increased OPTEMPO during the early stages of the war did not negatively affect morale or encumber the units from being successful. The study does not assert that the positive effects of wartime OPTEMPO continued for any period beyond July 2002.

### **Morale**

The increased OPTEMPO directly affected morale for 16 SOW and its units. The 16 SOS and 16 AGS may have maintained high levels of morale before the events of 11 September 2001, but the start of combat operations likely increased it. There is an essential relation of morale to a unit's mission and morale is generally higher in combat theaters.<sup>13</sup> Military members in wartime have higher motivation to achieve the unit's mission because failure can result in death.<sup>14</sup> Concepts of individual motivations embed within concepts of morale.<sup>15</sup> Motivation is an individual factor, and morale applies to a group's attitude about an organization. When the mission has tangible motivations for individual unit members, they have increased motivation to succeed and therefore morale

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<sup>12</sup> History, 16<sup>th</sup> Special Operations Wing, 1 July – 31 December 2001, Supporting Document 157

<sup>13</sup> Col Dale O Smith, "What is Morale?" *Air University Quarterly Review* (Winter 1951 1952), 43.

<sup>14</sup> Smith, "What is Morale?" 48.

<sup>15</sup> Lt Col John J. Zentner, *The Art of Wing Leadership and Aircrew Morale in Combat: Air University CADRE Paper No. 11*. (Maxwell AFB, AL: Air University Press, 2000), 13.

increases. Reports of high levels of enthusiasm and professionalism by squadron commanders and the awards for excellence earned by both units support the idea of improved morale in combat theaters.<sup>16</sup> Like OPTEMPO, this study does not assert that the positive effects of combat operations on morale continued for any period beyond July 2002.

## **Conclusion**

Overall, the five factors explored above benefited both units and provided an environment conducive to success. The official histories showed none of the basic factors adding friction to the 16 SOS's efforts. A pending reorganization provided a minor distraction for 16 AGS, but the impacts on the unit should have been slight. In the case of 16 SOS and 16 AGS, the basic factors were all adequate and both units were highly successful. Both squadrons were successful prior to start of the conflict. The transition from a combat ready force to a combat force likely improved morale for both units. Combat operations provide a more clearly defined and tangible idea of organizational goals. Successful achievement of organizational goals in combat generally results in an increased probability of survival for the members of the unit. In this way, the organizational goals and the goals of individuals align, improving attitudes about organizational success. When the goals of individuals and the organization align, morale is high.<sup>17</sup> The transition to combat operations provides two additional points for consideration.

The first additional point concerns aircrew morale and tactical innovation. Combat environments are chaotic and can seem to become uncontrollable for individual combatants. The ability to innovate tactically is a means for aircrews to cope with the stresses of combat and keep morale high. According to Lt Col John Zentner, when commanders encourage aircrews to innovate tactically, aircrews feel they can exercise additional control over the combat situation. Increased control helps maintain high levels of morale. This is especially true when the sense of danger increases, such as expecting increased levels of combat losses.<sup>18</sup>

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<sup>16</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Document 43.

<sup>17</sup> Smith, "What is Morale?" 48.

<sup>18</sup> Zentner, *the Art of Wing Leadership*, 98.

The statement made by the 16 SOS/CC in the 2002 end-of-tour report mentioned above, illustrates the unit's commitment to innovation in combat operations.<sup>19</sup> The same report gives a specific example of tactical innovation. On 9 December 2001, the Combined Forces Air Component Commander (CFACC) sent a personal note to a 16 SOS aircrew lauding their successful integration with new air and ground assets in the theater "including the first use of gunship-Predator 'hunter-killer' teams."<sup>20</sup> Another example occurred during the Mackay Trophy winning flight when a 16 SOS aircrew remained on station to support ground operations beyond daybreak until sufficient day close air support assets were available.<sup>21</sup>

Consideration of the transition from peacetime to wartime provides a second point to consider when dealing with realistic training. The 16 AGS, and the 3 squadrons it supported, did not generally deploy together as a single mass. Not only did the operational squadrons deploy to separate locations, but also elements from a single squadron could deploy to more than one location while other elements continued to operate from home station. Supporting multiple elements across dispersed locations was a way of life for 16 AGS in peace and wartime. The ability of the AMUs and elements of AMUs to operate in a near autonomous manner was a requirement for 16 AGS. Conducting such operations requires engrained processes at the squadron and AMU level, as well as refined communication procedures with home and deployed chains of command.

The 16 AGS was a very large squadron with nearly 800 personnel assigned. The squadron had so deeply engrained the way in which it deployed, conducted operations, and interacted across dispersed locations that its processes became automatic. Because peacetime operations functioned in essentially the same manner as wartime operations, the confidence existed. The units of the 16 SOW trained as they fought. Both 16 SOS and 16 AGS were highly successful units prior to the start of the war on terror. They were outstanding combat units due in part to a high level of readiness afforded by the five basic factors. They were also successful because they had tangible goals readily identifiable by individuals and processes deeply engrained through realistic training.

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<sup>19</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Document 43.

<sup>20</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Document 43.

<sup>21</sup> History 16<sup>th</sup> Special Operations Wing, 1 January – 30 June 2002, Supporting Document 53.

When combat operations began, the relationship between the personnel and the mission strengthened, resulting in continued success in conditions of increased stress.

These two post-9/11 cases conclude the historical analyses of historical eras. The next chapter compares the findings of each era as well as makes comparisons across other logical relationships. The project then uses that information to predict the status of the factors and their relationships in a final case. Chapter four ends with a presentation of the final case and a comparison of the prediction to the findings. Finally, the study closes with a presentation of conclusions regarding each factor and implications of the findings. Table 7 provides a summary of the Cold War Era findings. See Appendix D for a summary of all finding and an explanation of summary coding.

**Table 7: Summary of Post-9/11 Era**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
Post-9/11						
16 SOS						Combat and Innovation
16 AGS						Combat and Process

*Source: Author's Original Work*



## CHAPTER 4

### ANALYSIS AND TEST CASE

To this point, this project has examined the histories of six highly successful units to determine if the five basic factors were both necessary and sufficient to those units' successes. The examination also attempted to determine if there were any other factors contributing to the units' successes. Only two of the six squadrons studied were in a good situation with regards to all five basic factors, indicating that the five factors may be sufficient. Because most of the squadrons studied had a deficiency in at least one of the factors, it may not be necessary to have all five simultaneously. The ability for the factors to offset one another suggests potential relationships between them. Four squadrons indicated inadequacies in at least one of the basic factors, and appear to have compensated through leadership and culture. Because leadership and cultural factors arose in separate chapters, the study separately considers each at this point. There is a potential link, however, between an organization's leadership and its culture.

According to US Army leadership education, organizational culture consists of an organization's norms, what it does and its values, how it does what it does. Leaders can influence an organization's culture by focusing on its people, its operations, or both. A people-centric approach emphasizes climate by increasing individual commitment through a supportive command climate resulting in indirect operational improvements over time. An operation-centric approach gains commitment through compliance by imposing the leader's values on the organization, resulting in immediate improvements. A commander can also integrate these approaches as necessitated by the needs of the squadron.<sup>1</sup> In short, the commander plays a key role in whether a squadron maintains or changes its culture. Therefore, the project considers the cultural aspects found in Chapter 2 as part of the basic leadership factor. Understanding the link between culture and leadership indicates that the skill of leaders seems to be the primary factor successful squadrons leveraged to overcome shortfalls in other areas.

Thus far, the study compared squadrons based on the historical era in which they were successful. The remainder of this chapter first conducts additional comparisons

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<sup>1</sup> Mathew J. Bonnot, "Organizational Culture and Climate." (lecture, Army Command and General Staff College, Fort Leavenworth, KS, 19 September 2015).



between units by type and community to determine if other parallels exist beyond specific eras. Then, the chapter attempts to predict the state of the five factors in an additional case. This seventh case serves as a test for both the method used by this project and the findings to this point. The idea is that by understanding the five factors and their potential relationships, leaders can anticipate likely sources of friction. Lastly, an analysis of the final case provides the necessary data for comparison to the prediction. Additional findings from the test case conclude the chapter. Before making new comparisons, a brief summary of the findings by era is in order.

### Findings and Comparisons

#### Findings by Era

The two highly successful squadrons from the Cold War era, 28 MMS and 317 TRANSS, did not have all five of the basic factors present in the documents examined for this study. These units still found success and leveraged strong leadership, specifically in the areas of mission, vision, and communication. The squadrons of the Post-Cold War, but pre-9/11 era, also did not have the basic factors evident. The 1 CTCS and 9 BS leveraged culturally focused factors, specifically engrained processes and intrinsic motivation. The two units studied in the immediate aftermath of the 9/11 attacks, 16 SOS and 16 AGS, had all of the five factors. Additional considerations for these units included combat operations, tactical innovation, and engrained processes. The most common basic factor present was leadership. Only one case, 9 BS, had problems with leadership. See Table 5 for a graphic summary.

**Table 8: Findings by Era**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
<b>Cold War</b>						
28 MMS						Mission and Communication
317 TRANSS						Vision and Communication
<b>Post-Cold War/Pre-9/11</b>						
1 CTCS						Process
9 BS						Motivation and Cohesion
<b>Post-9/11</b>						
16 SOS						Combat and Innovation
16 AGS						Combat and Process

*Source: Author's Original Work*

#### Findings by Squadron Type

The two flying squadrons, 9 BS and 16 SOS, had most of the five factors present. The only deficiency was the relationship between leadership and morale in the 9 BS.

Factors appealing to individual motivation were present in both squadrons. 9 BS personnel indicated intrinsic motivations and cohesion among the CGO and NCO demographics. Purpose, autonomy, and mastery drive intrinsic motivation. The leadership that enabled this type of motivation may not have come from the squadron commander. It is likely that it came from either higher and/or lower echelons for the 9 BS. Additionally, the squadron commander may have misunderstood the appropriate mix of culture and climate necessary to improve morale in the unit.

The 16 SOS personnel were in a combat situation, aligning personal and organizational goals. The 16 SOS commander provided a climate that allowed for tactical innovation, creating a greater sense of control over the combat environment for the aviators. Although the sources of motivation for these two units were different, the result was that personnel's individual goals aligned with the achievements that earned Mackay Trophies. Table 6 shows a summary of the factors for the two flying squadrons.

**Table 9: Comparison of Flying Squadrons**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
Flying Squadrons						
9 BS						Motivation and Cohesion
16 SOS						Combat and Innovation

*Source: Author's Original Work*

The maintenance squadrons researched, 28 MMS and 16 AGS, had a similar distribution of the five factors as the flying squadrons. Morale for 28 MMS was the only insufficient area. In addition, similar to the flying units, factors associated with individual motivation were present. The 28 MMS had the new conventional mission with tangible goals and extrinsic motivations. The 16 AGS was in a combat zone. Communication played a role for both squadrons, but in diverse ways. The 28 MMS used communication skills to earn recognition and extrinsically motivate its personnel to achieve the new mission goals. The 16 AGS incorporated communication into its processes enabling operations across dispersed locations. The challenges posed by the new missions played a significant role in motivating the personnel of both squadrons. Skilled use of communication, for different purposes, enhanced both squadrons' efforts. Table 7 summarizes the findings for the two maintenance squadrons.

**Table 10: Comparison of Maintenance Squadrons**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
Maintenance Squadrons						
28 MMS						Mission and Communication
16 AGS						Combat and Process

Source: Author's Original Work

The two support squadrons examined, the 317 TRANSS and the 1 CTCS, had concerns with more factors than either operations or maintenance squadrons. Both squadrons had adequate leadership. The 317 TRANSS had good morale; however, all other areas had problems. The TRANSS' leadership was able to communicate up the chain to reorganizing the squadron and increase its manpower during a period of fiscal austerity.

The 1 CTCS was able to find success in spite of a pending reorganization it did not want, insufficient manpower, increasing OPTEMPO, and low morale. Deeply engrained processes provide the best explanation for 1 CTCS' success. Given the state of manpower, OPTEMPO, and morale in the midst of severe organizational turmoil, the leadership of 1 CTCS did an outstanding job of maintaining an environment necessary for the unit to achieve its mission. Neither of these squadrons had the factors generally considered sufficient for success. Both squadrons indicated strong leadership. These cases suggest that leadership is a powerful factor that, at least temporarily, can suffice to find organizational success. The diversity of the missions and challenges facing support squadrons necessitates further research to identify additional trends. Table 8 provides a visual comparison of the two squadrons.

**Table 11: Comparison of Support Squadrons**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
Support Squadrons						
317 TRANSS						Vision, Communication
1 CTCS						Process

Source: Author's Original Work

### Additional Findings

Another way to compare units is by community. The study compared the two special operations units in the post 9/11 earlier, as well as the two mobility units in the support squadron section. Because the two squadrons researched from the mobility community are support units, it is impossible to tell if the considerations are attributable to support or mobility units. Like support squadrons, determining trends in the mobility

community also requires additional research. The final community is from the combat air forces, specifically the bomber community.

The 28 MMS and 9 BS each had multiple factors satisfied; morale was the common lagging factor for each. Both cases display consideration to individual motivations. The squadrons offset low morale with motivations that appealed to individuals more than to the overall organization. The success of the 9 BS resulted from intrinsic motivations within individual squadron members, rather than from squadron leadership, helping the unit win the 1995 Mackay Trophy. Extrinsic motivations, designed by unit leaders to recognize individual and/or team efforts, were apparent in the 28 MMS. A possible reason for the low morale was the intangibility of the bomber's mission. While necessary, deterrence may not offer the same satisfaction as other missions. Table 9 compares the findings for the two units from the bomber community.

**Table 12: Comparison of Bomber Squadrons**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
<b>Bomber Community</b>						
28 MMS						Mission and Communication
9 BS						Motivation and Cohesion

Source: Authors Original Work

An additional opportunity for comparison exists between 1 CTCS and 16 AGS. These squadrons both used dispersed operations. The 1 CTCS had multiple detachments and supported operations at multiple locations simultaneously. The 16 AGS supported operations at multiple locations with individual AMUs maintaining different aircraft types. Both squadrons benefited from having engrained processes. When deeply engrained in a unit's culture as norms, good processes can result in the habits necessary for near-autonomous operations by dispersed units. One area of concern is that over reliance on process can stifle flexibility. The best processes account for this requirement and provide enough flexibility to prevent paralysis when faced with complex problems. Deeply engrained processes, good ones, appear to be a common factor for the two units that operated from multiple locations simultaneously. Table 10 graphically depicts this comparison. Please see Appendix D to see all of the comparisons on a single table and explanation of summary coding.

**Table 13: Comparison of Squadrons with Dispersed Operations**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
<b>Dispersed Operations</b>						
1 CTCS						Process
16 AGS						Combat, Process

*Source: Author's Original Work*

A final area of interest when comparing the five basic factors for success across the six squadrons is leadership. None of the six cases reported any leadership problems, with the exception of a concern with the 9 BS. There was a problem in the relationship between leadership and morale in the 9 BS. It is likely that the commander of the 9 BS lacked an understanding of how best to approach cultural change in the squadron and agitated unit morale. Even attributing the problem in 9 BS to leadership, the leadership factor is present in more cases than any other factor. This is not to say that leadership problems do not exist in Air Force squadrons. However, the data suggests that highly successful squadrons have effective leadership. Additionally, all six cases showed considerations attributed to leadership as improving contexts for individual squadrons to succeed. It appears that the five basic factors, when present, are sufficient for a squadron to be highly successful. The histories studied in this project show that more often than not, a squadron will not enjoy optimal situations in all five factors. Additionally, skilled leaders appear to offer the best means to overcome sub-optimal conditions and to achieve elevated levels of organizational success.

### **6593d Test Squadron**

#### **Background and Prediction**

The seventh and final case tests the findings from the other six cases. To do so, a prediction is necessary. The test case is the 6593d Test Squadron (TES) who earned the 1960 Mackay Trophy for conducting the first aerial recovery of an object from space orbit. The Air Force designated and organized the 6593 TES in August of 1958 to develop and employ training and recovery techniques for aerial recovery of scientific components of satellites in the Discoverer Program.<sup>2</sup> The squadron operated modified C-119 aircraft. Although the unit earned the 1960 Mackay Trophy, 6593 TES flew the

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<sup>2</sup> History, 6593d Test Squadron, 1 August – 31 December 1958, 2-4.

mission in 1959. By November of 1959, the 6593 TES completed its mission and the Air Force disbanded the unit.<sup>3</sup>

The late 1950s were fiscally generous to the Air Force. Not only were defense budgets high, the Air Force enjoyed nearly half of the budget, with the Army and Navy splitting the remaining portion.<sup>4</sup> The Air Force dominated the defense budget because of US strategic emphasis on nuclear and space forces.<sup>5</sup> With the budgetary environment and the unit's association with the space domain, it is likely that the 6593 TES had all the resources necessary to meet its mission. Because the 6593 TES sought to innovate a specific capability, the mission and its goals should have been tangible and timely. Because it was a newly formed squadron, the project anticipates some organizational friction. The squadron's mission was also very specific and dependent on external agencies. The study predicts that organizational friction will additionally cause irregular OPTEMPO due to the unique nature of the mission and the complexities of external coordination. In this case, the concern is not the stress of a high OPTEMPO, but a lack of focus due to low OPTEMPO.

The prediction made for the 6593 TES is that all resources will be available, but at least one area of concern is probable due to newness of the unit. The concerns are likely to manifest in the morale, OPTEMPO, or organizational aspects of the five factors. Additionally, the analysis expects to find evidence of motivated individuals due to the specificity of the mission. Processes should play a key role due to the nature of test missions. The study expects to find adequate leadership factors. In short, the study expects to find a squadron with some concerns associated with standing up a new unit, but the ability to overcome these challenges by virtue of the specificity of the mission and adherence to processes.

## **Organization**

The Air Force activated the 6593 TES on 1 August 1958; the unit or its specific mission did not previously exist. The squadron organized under headquarters Air Research and Development Command (ARDC) in Los Angeles, California. Air Force

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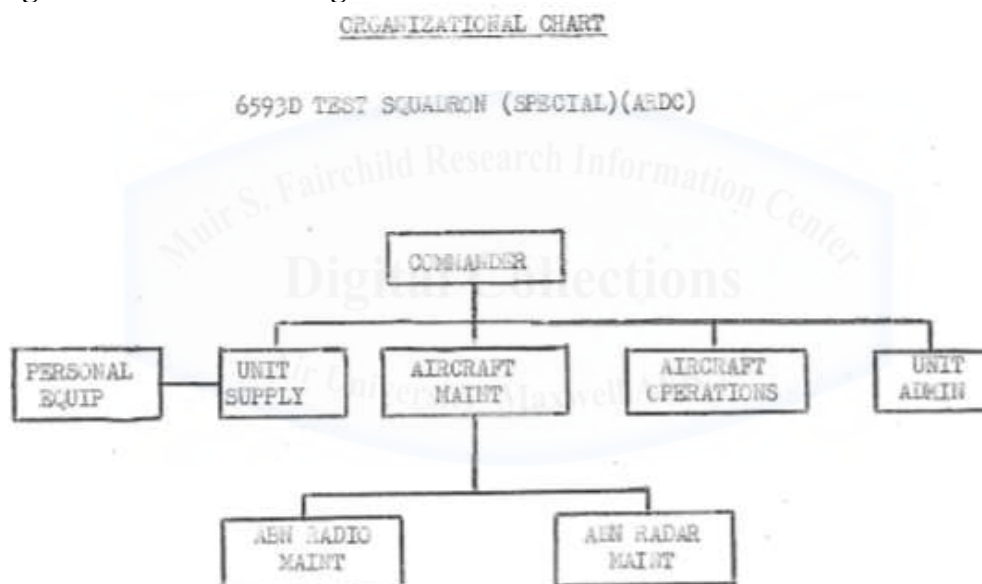
<sup>3</sup> Air Force Historical Research Agency, "A Guide to United States Air Force Lineage and Honors." <http://www.afhra.af.mil> (accessed 13 March 2017).

<sup>4</sup> Edward Kaplan, *To Kill Nations: American Strategy in the Air-Atomic Age and the Rise of Mutually Assured Destruction* (Ithaca, NY: Cornell University Press, 2015), 161.

<sup>5</sup> Kaplan, *To Kill Nations*, 218.

Ballistic Missile Division (AFBMD), also in Los Angeles, provided administrative and operational control. The 6593 TES temporarily formed at Edwards AFB in California for training and then, in December of 1958, relocated to Hickam AFB, Hawaii. After the squadron relocated, Hickam AFB's 6486th Air Base Wing (ABW) provided logistic and administrative support.<sup>6</sup> Units of the 6486 ABW also provided specialized maintenance. The squadron established a simple organizational structure consisting of operations, maintenance, supply, and administrative branches (see Figure 10 below). The structure of the squadron and its command relationships were adequate for the unit to achieve its mission. The newness of the squadron provided challenges that manifested in other areas discussed later.

**Figure 10: 6593 TES Organization Chart**



*Source: History, 6593d Test Squadron, 1 January – 30 June 1959, 1.*

## Leadership

When assembling the leadership team for 6593 TES, ARDC chose experienced officers to fill the top positions. The squadron commander, operations officer, and maintenance officer all had performed the same duties on previous projects and had experience in a newly activated squadron. Before selection to the 6593 TES, all three officers served in the 463rd Troop Carrier Wing at Ardmore AFB in Oklahoma. The top

<sup>6</sup> History, 6593d Test Squadron, 1 January – 30 June 1959, 2.



three officers had experience with the C-119 and were familiar with the same procedures.<sup>7</sup> The official unit history notes that the experience of the leaders resulted in the avoidance of problems that would have normally impeded the progress of a newly formed squadron.<sup>8</sup> The remainder of the key staff, first sergeant, supply officer, and administrative officer, had no experience in activating a new unit. Overall, the leadership situation for the 6593 TES was strong.

### **Manpower**

The 6593 TES maintained adequate manpower numbers throughout its brief history. The original number of authorized personnel was 183. Recognizing that it required fewer personnel, the unit voluntarily downsized to 117 personnel and maintained 100 percent of authorized personnel assigned.<sup>9</sup> Although the total number of personnel was adequate, the squadron did not have personnel with the correct skills in every authorized position. Out of necessity, the commander assigned personnel to duties outside of their official air force specialty codes (AFSC).<sup>10</sup> Later the unit changed its manning document to reflect the actual personnel assigned to each position. The changes were more indicative of mission requirements and had a positive effect on morale.<sup>11</sup> Overall, the number of personnel assigned to the unit was adequate, but leadership had not staffed the unit with the right people. Manpower considerations provide two areas of concern, both symptoms of activating a new unit. One was having the wrong specialties assigned to the unit. The other was initially having over one-third more manpower authorized than was necessary. Neither of these concerns proved to be prohibitive for unit success.

### **OPTEMPO**

The pace of operations kept the 6593 TES very busy. While at Edwards AFB, from August to December of 1958, the unit maintainers acquired the aircraft and modified them for the specialized mission. Aircrews conducted training to become qualified to perform the aerial recovery mission with the modified C-119s. The squadron completed its relocation to Hickam AFB on 10 December 1958 and began flying

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<sup>7</sup> History, 6593d Test Squadron, 1 August – 31 December 1958, 3.

<sup>8</sup> History, 6593d Test Squadron, 1 August – 31 December 1958, 3.

<sup>9</sup> History, 6593d Test Squadron, 1 August – 31 December 1958, 16.

<sup>10</sup> History, 6593d Test Squadron, 1 August – 31 December 1958, 17.

<sup>11</sup> History, 6593d Test Squadron, 1 January – 30 June 1959, 17.

operations in January of 1959.<sup>12</sup> OPTEMPO in Hawaii was high. The aging C-119 aircraft and the maritime environment kept maintenance personnel busy.

The 6593 TES' mission required coordination and integration with multiple external systems including naval surface vessels, reconnaissance aircraft, and space launch systems. Unlike the 6593 TES, the other units necessary for the mission had other requirements. The mission demands on these other agencies led to a lack of continuity between assets for each mission. The lack of continuity increased the number of training and exercise missions prior to each actual recovery mission. Additionally, regular training flights were necessary for crew proficiency.<sup>13</sup> OPTEMPO did not pose a problem for the 6593 TES.

### **Morale**

Morale was also not a problem for the 6593 TES. The official histories specifically rate unit morale as excellent. There were no major offenses reported, no disciplinary or court actions taken and no letters of indebtedness sent to the squadron. The only morale concern involved the quality of the Airmen's barracks. The junior enlisted personnel lived in open bay barracks, affording little privacy. Squadron leadership worked with the 6486 ABW to construct wooden cubicles to improve the situations.<sup>14</sup> Unit morale was high for 6593 TES, enhancing its ability to perform its mission.

### **Analysis and Conclusions**

Most of the basic factors were adequate for the 6593 TES. Squadron leadership had experience in activating new units and with the aircraft and processes the squadron used. Although the mission was very specific and required coordination with multiple external agencies, OPTEMPO remained beneficially high. The squadron histories reported excellent morale. The only area of concern involved the AFSCs of assigned personnel. However, this personnel challenge was not a negative factor with regard to unit manpower. The creation of the new squadron was at the root of the problem and leadership adjusted manpower and personnel to "right size" the unit over time.

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<sup>12</sup> History, 6593d Test Squadron, 1 January – 30 June 1959, 27.

<sup>13</sup> History, 6593d Test Squadron, 1 January – 30 June 1959, 9-10.

<sup>14</sup> History, 6593d Test Squadron, 1 January – 30 June 1959, 20.

Therefore, organizational factors posed some problems for the 6593 TES, although, the other four factors were adequate.

The study method predicted that the 6593 TES would experience at least one problem area due to the newness of the unit, and that a problem, or problems, would manifest in the morale, OPTEMPO, or organizational factors. In actuality, organizational issues associated with standing up the new unit manifested as a manpower and personnel challenge. The cause of the problem, newness of the unit, matches the prediction. The friction caused by organizational instability, in this case creating a new squadron, could result in problems in of the other factor areas.

The study predicted OPTEMPO as the likely problem area because the mission depended on external units. The idea was that the complexity of coordination would lead to periods of low OPTEMPO and possibly lead to dissatisfaction among squadron personnel. In fact, the requirement to integrate with external agencies increased OPTEMPO. A lack of continuity among personnel from the external units drove increased exercises and training demands.

Additionally, the study predicted motivated individuals and processes as playing key roles. The documents did not specifically address motivation; however, morale was high, so the project assumes high motivation, as well. The mission was specific and focused which supports the assumption of motivated individuals. Reliance on procedures and processes was evident in the histories, but the scientific nature of test missions makes this an easy prediction. The framework used to analyze the six squadrons allowed for prediction in another squadron. The researcher was able to predict a likely source of problems, but not the specific problem.

The prediction for the test case assumed a strong relationship between organization and OPTEMPO. In turn, the relationship between organization and manpower appears to be stronger. When an organization changes, it might approach its processes differently. Attempting to use new groupings of personnel to accomplish the same mission may necessitate a change in process. In the case of 6593 TES, the Air Force created a new squadron and assigned personnel to it before there was a clear understanding of the processes the unit would use. The result was too many personnel and the wrong mix of specialties. Squadron leadership was able to overcome the problem

and complete the mission. This may not have been possible though if the squadron had been grossly under, instead of over, staffed. The true relation of OPTEMPO to organization and manpower is as a compounding factor. If manpower and personnel factors are sufficient, OPTEMPO is less problematic. If the unit is properly organized, manpower is better able to achieve the unit mission. In this way, organization, manpower, and OPTEMPO affect one another. A problem, or solution, for one can manifest in another.

The study has already explained the relationship between leadership and morale; however, not how they relate to the other factors. OPTEMPO is the most likely link between these two groups of factors. When OPTEMPO is having a negative impact on the unit, the likely result is a decrease in morale. If OPTEMPO is too high for the organization or strength of the unit, stress on individuals may increase beyond an acceptable level. If OPTEMPO is too low, personnel may feel the mission is less important and become detached from organizational goals. OPTEMPO is the factor that ties the other factors together.

**Table 14: Comparison of Prediction and Findings**

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
6593 TES						
Predicted						Motivaton and Process
Actual						Motivation and Process

*Source: Author's Original Work*

## CONCLUSIONS AND IMPLICATIONS

### Conclusions

This study has sought to determine how the five factors examined historically contributed to the accomplishments of highly successful USAF squadrons. By determining these factors, this study hoped to provide some insight into how the Air Force can achieve the CSAF's goal of revitalizing squadrons into the cohesive, ready, and agile fighting forces the nation requires. The study made three basic assumptions. The first assumption was that General Goldfein chose the term revitalize because he believes squadrons need to attain some attribute they once had. Second, that analysis of official unit histories could uncover the factors contributing to a squadron's success at a given point in time. The last assumption was that the Air Force has bestowed unit awards to highly successful squadrons.

The study deductively explored the factors of organization, leadership, manpower and personnel, OPTEMPO, and morale in six cases of highly successful squadrons throughout USAF history to examine if these five factors presented necessary and sufficient conditions for a squadron to achieve high levels of success. The project then used the findings of those cases to predict the status of the five factors in an additional case. The prediction held partly true identifying the factor most likely to be problematic, but misidentified the specific problem manifested in the case. Two cases, both of the post-9/11 era, showed that when a squadron satisfies all five factors, it has sufficient conditions for success. The other cases showed that it is not necessary for a squadron to excel in all five areas simultaneously in order to be successful.

The factors intertwine; when one area is deficient, positive aspects of other factors can overcome the deficiency. Organization, manpower, and OPTEMPO seem to affect one another; when a problem manifests with one, there is probably a problem with at least one of the others. Another close relationship exists between leadership and morale. The interaction between these two factors affects unit success. Additionally, leadership appears to be the most common factor to influence the other four. Leadership factors, including organizational culture, provide the best explanation for how units are able to find success when they lack an ideal level of resources or the most advantageous

structure. The remainder of this section recaps the findings for each factor and provides some implications for consideration.

### **Organization, Manpower, and OPTEMPO**

Organization, manpower, and OPTEMPO are resource-oriented factors. They are somewhat tangible and more quantifiable than leadership and morale. None of the seven cases showed these three factors together leading to success without some positive measure of either leadership or morale. These resource-oriented factors are not sufficient to influence high morale, but may be necessary to sustain it over time. Because these factors are all resource oriented, they affect one another. A change in one area can affect the other two. Problems in one area can manifest in the others. When considering how to influence the organization through any of these factor areas, leaders should consider the interplay between all three.

Organization is how the unit divides and groups its resources in order to execute its processes and achieve its mission. Changes in organization can come from above or within a squadron's chain of command. Organizational changes usually intend to have a stabilizing effect at the level that the change originated. When organizational changes are necessary, leaders should anticipate how the change might cause friction at other echelons. When organizational friction occurs, it appears to have a greater negative effect than issues with other resource-oriented factors. Manpower is the primary resource organizations need to accomplish their mission. Improper organization can lead to inefficient use of manpower. High OPTEMPO can magnify manpower problems.

None of the cases found organization alone to be a sufficient factor for success. The squadrons that overcame organizational concerns did so by leveraging leadership and morale to offset friction. When coupled with good leadership, an organization can minimize issues caused by OPTEMPO and manpower. When manpower, or levels of OPTEMPO changes, leaders should consider the organization and, when necessary, change it to ensure the most efficient and effective use of resources. When an organization's mission, goals, or processes change, leaders should consider if the unit structure supports the change. Organizing the unit to make the best use of its resources provides commanders the opportunity to influence all three resource-oriented factors.

This project addresses manpower and personnel together. These two elements address the quantity and skills of the human resources available to an organization. Together, manpower and personnel provide an organization its capacity to complete its mission. The dual nature of this factor results in two possible issues, not enough people, or not the right people, to accomplish the mission. Any of these problems could result in inefficient process execution and possibly mission failure. Additionally, inefficient allocation of manpower due to improper organization can cause similar problems as insufficient manpower. Problems with OPTEMPO can confound manpower problems. When a unit has insufficient capacity to meet OPTEMPO demands, increases in demand worsen the capacity problem for people.

The study did not find any instances where manpower was the lone factor for contributing to a unit's success. An adequate quantity of proper personnel is not in and of itself a sufficient condition for success. Manpower factors relate closely to organizational concerns; all cases with manpower issues also displayed organizational frictions. When improperly organized, manpower can become inadequate due to inefficiencies. OPTEMPO magnifies manpower concerns by increasing demand on over-used human resources. When organization or OPTEMPO changes, leaders should consider if the available manpower is adequate to complete the mission in the newly structured environment without overusing personnel collectively or individually. Any time an organization's mission, goals, or processes change, commanders should also consider the effects on the unit's capacity. It is however, conceivable that organizations may have personnel problems that even the most efficient structure and process can overcome. In this case, additional manpower is necessary.

OPTEMPO itself is not a resource, but the demand placed on a unit. Time on the other hand is a resource and OPTEMPO determines how a unit applies its other resources over time. OPTEMPO also seems to bridge the resource factors and unit morale. When OPTEMPO is too high, personnel can burn out and morale can suffer. When OPTEMPO is too low, skills can atrophy, and personnel may feel underutilized. High OPTEMPO also appears to compound problems with the organization and manpower. Organizational factors are often at the core of manpower problems. OPTEMPO exacerbates manpower problems. The linkages between these factors can create a slippery slope for morale.



According to the analysis, in no case did OPTEMPO alone result in unit success. Units that expressed concerns with OPTEMPO also had issues with manpower and organization. Solutions for OPTEMPO problems involve organization and manpower. Reordering tasks, personnel, or processes may solve the root problem if adequate manpower is available. When resource concerns begin to affect morale, managing OPTEMPO may offer temporary relief until the unit can optimize its resources and improve its morale. Because of the relationship between the three resource factors, relief from extreme OPTEMPO may be necessary to alleviate strains on other problems.

### **Leadership and Morale**

Leadership and morale are factors oriented toward a squadron's will and culture. These factors are less tangible, but also more directly contributes to success than the resource-oriented factors above. Good leadership leads to good morale and good morale leads to good performance, which enhances the perception of good leadership.<sup>1</sup> One case, 1 CTCS, showed leadership as the only acceptable factor available. This single example does not suggest that there were no other resources or motivations available; however, this case does indicate is there is a threshold for resources, and when resources are not optimal, there may be a way to find success. The 1 CTCS's processes were good enough to meet mission demands with the resources it had on hand. It is likely though, that if the resource situation did not improve, then the unit's success would have diminished over time. Leadership and morale can be sufficient for success, but without adequate resources, units may find diminishing levels of success over time.

Leadership encompasses the ability to manage resources, inspire people to achieve organizational goals, and leading necessary change. Leadership proved a necessary condition for organizational success. The previous section discussed the role of leadership in managing resources. Similar to organizational success, but to a lesser degree, proper management of resources can reinforce perception of leadership. A leader's ability to inspire has a more direct impact on morale and success than management does.

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<sup>1</sup> Lt Col John J. Zentner, *The Art of Wing Leadership and Aircrew Morale in Combat: Air University CADRE Paper No. 11*. (Maxwell AFB, AL: Air University Press, 2000), 5.

The ability to communicate effectively is a necessary skill for a leader to inspire unit personnel. Leaders must be able to listen and understand the perspectives and culture of the unit. Leaders must also be able to explain goals and provide feedback that speak to the perspectives of their people and reinforce the proper aspects of culture. Additionally, leaders must also be able to communicate up and down the chain to recognize achievement and improve status of resources. In short, a leader must have well developed listening, speaking, and writing skills; these skills improve the ability to inspire success.

Part of inspiring people is motivating them toward achieving organizational goals. There are two types of motivation, intrinsic and extrinsic. A sense of purpose, self-direction, and mastery drive intrinsic motivation. Command climates that complement these drivers can result in personnel that are self-starters and require the least oversight. Extrinsic motivation is less desirable than intrinsic.<sup>2</sup> Extrinsic motivation requires transactional leadership techniques usually in the form of formal recognition or reward. However, when morale is low, extrinsic motivation can provide a catalyst toward improving unit morale.

The final finding for the leadership factor is that award-winning leadership requires the ability to lead necessary change. A unit's culture requires change when it inhibits the ability of a unit to achieve its mission and goals. Leaders with the communication skills to recognize that a problem exists and motivate people will have a greater chance of successfully leading change than those that do not. Leading change is an arduous task for leader and requires investments of time, attention, and resources. Morale concerns are another issue that offers difficult challenges for leadership.

Morale is the overall attitude of the unit about its mission and goals. Motivation and cohesion are subcomponents of morale. Motivation refers to the feelings of individuals where cohesion involves sub-groupings of the unit.<sup>3</sup> Morale appears to be necessary for high levels of continued success. It is hard to gauge and quantify and therefore requires the ability to communicate effectively to understand it. When morale is low, it is usually due to the interaction with factors that fall within the purview of

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<sup>2</sup> Mathew J. Bonnot, "Organizational Culture and Climate." (lecture, Army Command and General Staff College, Fort Leavenworth, KS, 19 September 2015).

<sup>3</sup> Zentner, *the Art of Wing Leadership*, 12-13.

leaders. The case of the 9 BS illustrates how a leader out of touch with squadron culture can detract from unit morale. When leadership and culture are out-of-sync and morale is suffering, leaders must act. A leader must first understand the situation and then take the proper approach with regards to people and mission to correct the issue.

Because morale encompasses attitudes about goals, it is necessary for all personnel to have a clear understanding of goals. If a leader can communicate unit goals in manner that improves the ability of individuals to identify with them, then the unit can improve its morale. When people identify with organizational goals, it becomes easier to motivate them toward those goals. As leaders motivate individuals, positive attitudes emerge that can contribute to success. A unit that possesses pockets of motivated people, but lacks an overall high level of morale should not be the desired state. Leaders can leverage positive attitudes in sub-areas to improve overall morale. As parts of the unit become successful, these successes can improve the perception of good leadership, in turn improving morale. Lasting improvements will result from properly communicated goals that link the mission of the squadron and its people. Good leadership and good morale will lead to success. Like leading change, morale problems are a difficult challenge for leaders and requiring deeper thought and greater engagement than most other areas of concern.

### **Implications**

The findings of this study imply that as the Air Force revitalizes squadrons, its long-term strategy for this goal should include investing in the training, education, and mentorship of rising squadron leadership. Whatever methods the Air Force sets to revitalize squadrons, the skill of squadron leadership to implement them will strongly influence if those efforts are successful. Leaders should understand the relationships between the five factors and be able to predict likely sources of friction in their squadrons. This type of understanding can help ease friction when resource situations are in flux, like in the case of 6593 TES.

Commanders should also understand the relationship between leadership, morale, and success; specifically, the importance of goals, process, motivation, culture, and change. A better understanding of culture, climate, and leading change may have benefited the 9 BS commander in 1995. The Air Force should include these aspects of

leadership at multiple levels of military education, with a very focused effort at the intermediate level of developmental education. Exposure to these concepts at earlier levels of education will help squadron personnel understand their role in success. Concentrated education at the intermediate level is timely for rising squadron commanders. Having more personnel with an understanding of leadership factors and their relationships will provide more personnel ready to assume greater responsibility when the Air Force needs it.

Another implication is the need for increased education in communication. In several cases, this study identified the effects of strong communication skills on unit success. The 28 MMS commander used his communication skills to motivate extrinsically his personnel. The leadership of 317 TRANSS communicated a need for additional manpower and received it in spite of resource constraints across the Air Force. Commanders, superintendents, and first sergeants must have the ability to listen and understand what squadron personnel value and their attitude toward the mission. When necessary, a commander must be able to translate the mission and goals in a manner that speaks best to the people of the unit. Leaders must also be able to motivate their personnel through verbal and written means. Additionally, the ability to communicate the needs and accomplishments of the unit up the chain of command is a necessary skill to overcome resource inadequacies inhibiting unit success. Like leadership, the Air Force should maximize every opportunity to improve the communication skills of Airmen.

A final implication involves processes. Processes are how squadrons achieve their goals and succeed in their mission. The research identified that deeply engrained processes are especially important for units with dispersed operations. Units with processes engrained in their culture appear to have the ability to continue progress toward unit goals even when there is no other good reason explaining their progress. The case of 1 CTCS in chapter two is an example of this phenomena. It is possible for the Air Force to encourage squadrons to etch their processes deeply into their culture.

The United States Navy has a tradition of placing an executive officer in a unit with the intent of promoting the officer to command that unit in the future. The Navy calls this tradition *fleeting up*. By spending a year serving with the previous commander, the executive officer has the opportunity to focus on the unit's processes. The practice of

fleeting up minimizes unnecessary changes and allows units to engrain deeply their processes into their culture.<sup>4</sup> The argument here for fleeting up is not that the Air Force should adopt this practice as a policy requirement for squadron command. Instead, senior leadership should consider the concept when choosing squadron commanders. Squadrons that are performing well with, with good processes that worthy of reinforcement would be good candidates for fleeting up. Squadrons due for a cultural or process change would not be.

Skillful leadership is the recurring theme throughout the cases examine in this study. The development of leadership skills is necessary for the long-term success of squadron revitalization. More often than not, squadrons have not enjoyed the benefits of all five factors simultaneously. This study found no case where leadership was not a significant factor influencing squadron morale and success. Skilled leaders are the lynchpin to the success of squadrons in general, and to realizing CSAF's goal of revitalizing squadrons specifically. Leaders of the revitalized squadrons will again be the factor having the greatest bearing on the success of this effort.

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<sup>4</sup> Brig Gen Stacey T. Hawkins, email message to the author, 1 March 2017.



## APPENDIX A

### CSAF Letter to Airmen August 2016



CHIEF OF STAFF  
UNITED STATES AIR FORCE  
WASHINGTON

#### **The Beating Heart of the Air Force ... Squadrons!**

On 1 July, Secretary James swore me in as your 21st Chief of Staff. This is the privilege of a lifetime. Standing on the shoulders of the 20 giants who paved the way ahead of me, I take on this sacred duty of leading our 660,000 active, guard, reserve, and civilian Airmen absolutely committed to servant leadership. I am honored to be your Chief.

Over the next several weeks leading up to the Air Force Association convention in September, I will publish a series of short papers laying out my thinking on key focus areas. This is the first in the series.

Under the leadership of Secretary James, General Welsh, and Chief Cody, we completed a number of strategic planning documents that provide a useful framework and planning process to shape our future force. I fully support the strategy articulated in the Strategic Master Plan (SMP) and Air Force Future Operating Concept (AFFOC) and we will continue to align our strategy with this vision. I also look forward to championing the priorities that Secretary James has established for us and has so consistently and tirelessly advocated throughout her tenure: Taking Care of People, Balancing Today's Readiness with Tomorrow's Modernization, and Making Every Dollar Count.

If we are to achieve the aspirations laid out in the SMP and AFFOC, I believe we must have a solid foundation organizationally. Our own AFIs state that "squadrons are the basic, building block organizations in the Air Force, providing a specific operational or support capability." I have always believed this to be true and so I am convinced it's where we need to start. This applies equally to our support organizations that may not align under a squadron construct, but actively support squadrons in the execution of their mission.

The squadron is the beating heart of the United States Air Force; our most essential team. We succeed or fail in our missions at the squadron-level because that is where we develop, train, and build Airmen. Our service culture and traditions manifest themselves in the squadron because our Airmen most readily identify with this core fighting unit. Squadrons are the engines of innovation and esprit de corps. Squadrons possess the greatest potential for operational agility. Squadron commanders, civilian leaders, superintendents, and first sergeants have the most profound and lasting impact on Airmen and families. They set and enforce standards, create the environment where the right things are fostered (warfighting excellence, esprit de corps, thriving Airmen and families)... and are the first line of defense against

behaviors we find unacceptable (a toxic work environment, sexual assault, suicide, domestic violence).

It is time to revitalize the squadron as the warfighting core of our Air Force. Our vision demands that "squadrons be highly capable, expeditionary teams who can successfully defend our Nation's interests in both today's and tomorrow's complex operating environments." We will succeed only when our squadrons are "the cohesive, ready, and agile fighting forces that the Air Force, Combatant Commanders, and the Nation requires".

The past fifteen years have wrought an almost singular focus on countering violent extremism in the Middle East. That necessity has resulted in considerable trades across the portfolios of Global Vigilance, Reach, and Power. Even under difficult budget conditions, we delivered when the Nation called on us to increase investment in ISR, Space, Cyber, and to revitalize the Nuclear Enterprise. In the ISR portfolio alone, we grew an RPA industry from scratch that has become the oxygen the joint force breathes.

However, our success has come at a price. We were compelled to find operational efficiencies to balance our budgets, with manpower and conventional airpower accounts suffering most. Squadrons have been asked to bear the brunt of an incredible deployment tempo and manpower shortages which have had a direct impact on readiness in our warfighting missions. In my experience, readiness and morale are inextricably linked. Walk the line at Bagram AB or Al Udeid AB where units are fully manned and readiness is high and you'll find morale is equally high. Visit one of our CONUS main operating bases and you'll often find manning hovering between 60-70% with many key supervisors and leaders deployed or dual-hatted, remaining Airmen working overtime, and units managing parts and equipment shortages. On top of this, our squadron commanders, civilian leaders, superintendents, first sergeants, and Airmen feel first-hand the challenges associated with increased mandatory recurring training, a growing list of additional duties, and the challenge of a "do-it-yourself" world in place of Airmen who previously provided services for them.

The resultant effect of these challenges is we have degraded the core fighting unit of our Air Force. The place where Airmen live, breathe, and grow, where we generate combat capability, and where our culture resides ... the squadron.

Over the next several weeks leading up to our 69th birthday celebration and the AFA convention in September, I look forward to a robust discussion across the Air Force to sharpen this dialogue and fill in the "how" behind the "why".



Bottom line -- if we are going to sustain warfighting excellence and build the Air Force outlined in the SMP and AFFOC, it must begin in our squadrons. Therefore, revitalizing squadrons as the core fighting unit in our Air Force will be the primary focus in my first year as your Chief.

I look forward to working closely with our Secretary, MAJCOM Commanders, and Air Force leadership team across our total force to get after this in the months ahead.

Fight's on!

  
DAVE GOLDFEIN  
General, USAF  
Chief of Staff



## APPENDIX B

### CSAF Letter to Airmen October 2016



CHIEF OF STAFF  
UNITED STATES AIR FORCE  
WASHINGTON

#### **Strengthening Joint Leaders and Teams ... a Combined Arms Imperative**

This paper is the second in a series to share my thinking behind three key CSAF focus areas over the next four years. As stated in the first paper, "Revitalizing Squadrons – the Heartbeat of the Air Force", these ideas are neither revolutionary nor a significant vector change. Each align with our Air Force Future Operating Concept and Strategic Master Plan – our strategic vision documents. They also nest perfectly under Secretary James' three priorities: Taking Care of Airmen; Balancing Readiness and Modernization; and Making Every Dollar Count. Said another way, these ideas are about evolution ... not revolution.

Today's national security challenges come from a combination of strong states that are challenging world order, weak states that cannot preserve order, and poorly governed spaces that provide sanctuary to extremists who seek to destabilize world order. From China's actions to militarize the South China Sea ... to Russian aggression in Eastern Europe ... to Iran's continued malicious activity ... to nuclear aspirations of an increasingly unstable North Korea ... we have returned to the era of state-on-state competition even as we counter violent extremism in the Middle East, prevent its spread to other regions, and disrupt attacks worldwide.

Given we will be facing the challenges listed above for the next several years, it is essential we strengthen the development of Airmen who are not only steeped in the business of Airpower, but also knowledgeable in how to optimize every component as part of a Joint Task Force (JTF). Airmen, leveraging the same leadership used to blend joint and coalition partners into a synergized air campaign, must be ready to lead and work in JTF HQs designed to synergize all components. Airmen, embodied with the global perspective natural to the speed and range of airpower, have much to contribute through leadership at the highest levels of joint command.

To better prepare our officer, enlisted, and civilian force to stand up, lead, and support a JTF, we must reinvigorate our development to purposefully and systematically gain proficiency in joint warfare earlier in the careers of Airmen. Our Airmen should continue to serve in joint positions, both on the staff and operationally, and capitalize on joint experiences, education and training. Our culture must value those who serve in these joint positions. We then must promote what we value and invest in Total Force Airmen who are joint warfighters.

In parallel with the development of Airmen to lead joint operations, we must evolve the composition and training of our organizations to deploy as a JTF HQ. We'll start our

training with 9 AF and the AFCENT missions co-located at Shaw AFB and certify the commander and staff as a core JTF HQ. Under the leadership of COMACC, we'll learn from this effort and then look to expand it to selected Component Numbered Air Force (C-NAF) HQs. As wings across our Air Force generally report to NAF Commanders, I'll expect NAF Commanders to bring the language and battle rhythm of a JFC HQ into the daily rhythm of our wings as we exercise missions in support of a Joint Commander. I'll also expect Wing Commanders to educate Squadron Commanders on the value of joint comprehensive readiness. To support this, our education and training programs will also provide the right Joint training at the right time for our leaders. These changes will naturally influence how we exercise and inspect NAFs and wings to further solidify the business of joint warfighting and JTF leadership across the Air Force. This is about instilling joint warfighting expertise into our formations and Airmen at all levels to include combat and combat support.

We'll also look at how we present forces to a Combatant Commander. Historically, JTFs stand up within days or weeks of a crisis with little fanfare or warning. While intended to exist only for the duration of the crisis, they often become enduring. Therefore, with little time to prepare before the formation of a JTF, it is critical that we have Airmen trained and ready to provide the crucial airpower component and JTF leadership whenever and wherever needed.

It also means we need to reset how we deploy Airmen to a fight. Over the past 15 years, we migrated from deploying as teams to often deploying as individual Airmen. Throughout our history, we tend to do our best work by training, deploying, employing, and re-deploying as teams. We'll never be the component that sticks rigidly to a fixed team size for deployment (i.e. a set squadron or flight) because the Nation needs its Air Force to be more flexible. However, over the last few years, more Airmen have deployed into combat as individuals at the expense of Airmen and unit readiness.

With 15 years behind us in this fight ... and likely 15 more years ahead ... this is important, timely, and worthy work. Strong leadership is required to train together, deploy together, fight together, and return together. This is especially important for our Guard and Reserve Airmen who often return home without a main operating base or unit to share their combat experiences.

Over the next four years, I look forward to working with our Secretary, MAJCOM Commanders, and Air Force leadership to strengthen our joint warfighting leaders and teams. As always, I am proud to serve with you.

Fight's on!

A handwritten signature in black ink, reading "Dave Goldfein". The signature is fluid and cursive, with a long horizontal stroke at the end.

DAVE GOLDFEIN  
General, USAF  
Chief of Staff



## APPENDIX C

### CSAF Letter to Airmen March 2017



CHIEF OF STAFF  
UNITED STATES AIR FORCE  
WASHINGTON

#### Enhancing Multi-domain Command and Control...Tying It All Together

This paper outlines my third and final focus area, Multi-Domain Command and Control (MDC2). In the first two papers – Revitalizing Squadrons, and Strengthening Joint Leaders and Teams – I laid out how an evolving operating environment demands a renewed focus on developing our Airmen and organizations. The changing national security environment also requires us to examine how we sense, decide, and act rapidly and in concert across all domains – or put it another way, master command and control of the multi-domain battle.

While we dominate the air, space and cyber domains today, our adversaries have invested heavily in technologies to deny us the superiority we have come to rely upon. To counter this, we must integrate our advantages across these domains in new and dramatically effective ways. Linking operations moving at the speed of light with operations moving at the speed of sound requires we bring it all together; the skills of our Airmen, the vision of our leaders, and the audacity and technical innovation found throughout Air Force history.

Multi-domain battle is more than the ability to work in multiple domains. We already do this quite effectively in today's Air Operations Centers. It is also more than operations in one domain supporting or complementing operations in another domain. An advanced multi-domain operating concept (CONOPS) will exploit current and new capabilities as well as integrate joint and coalition capabilities across all military operations. It will allow us to both see more opportunities and generate more options for our nation's leaders. Nominally, as either the Joint Forces Air Component Commander or Joint Forces Commander facilitating a campaign, we will be responsible for the delivery and articulation of joint fires. This responsibility mandates that we master MDC2.

To use a football analogy, we have developed and employed the greatest running attack the sport of football has ever seen. Over time, our opponents adjusted and built their defenses to limit our running-style. Therefore, we must shift to develop a new kind of offense. We will not abandon the run but will enhance our passing game and create a multi-dimensional attack that not only keeps the defense off balance (because we can attack in multiple ways) but also plays at an increased tempo so they will not have time to adjust. We must be able to overwhelm the enemy.

This evolution in our command-and-control capabilities requires new thinking, new training, and perhaps new technologies or new ways to use older technology. We will need to integrate real-time information from a variety of sources – some non-traditional -

- and evaluate that information as fast as systems can process it. If an enemy blocks actions in one domain, we quickly "call an audible" to change the play and attack or defend from another. Future multi-domain operations will be high velocity, agile, and joint by their very nature.

The elements to make command and control work are situational awareness, rapid decision-making, and the ability to direct forces to achieve commander's intent.

The first essential element is situational awareness. Our ability to collect and distribute data and transform it into intelligence is robust, but we need to better integrate non-traditional sources of information. We also need to leverage our interagency, commercial, and foreign partners' capabilities. To make sense of that volume of information, we need common architectures, standardized data formatting, increased machine-to-machine and artificial learning systems, and better integration to rapidly identify, synthesize, and present timely, decision-quality information to the right leader in the most useful format possible.

Situational awareness is most powerful when it enables effective and timely decision-making at the right level whether tactical, operational or strategic. Making such decisions at the needed operational tempo presents both a human as well as a technical challenge. We must continue to develop and empower Airmen at all levels: tactical, operational, and strategic, with the skills for joint planning, battle management, and better understanding of how to optimize joint capabilities across multiple domains. We need both leaders and tools that can visualize multiple battlespaces and execute rapid decision-making in an outright fight or in competition short of armed conflict.

Finally, advanced multi-domain C2 must enable commanders to leverage this enhanced decision-making capability to direct forces across domains and missions. I don't see this as the top-down issuance of orders. It is more of a continuous feedback loop that includes command direction but also real-time reporting of the changing battlespace, battle management of emerging threats and opportunities, and dynamic status updates of forces, their supporting structures and enabling elements.

Just as we did with the first two focus areas, I have assigned a Brigadier General and a CMSgt to drive this dialogue forward and deliver on expectations. Brigadier General Chance Saltzman and CMSgt Brian Stafford, HAF A3, will lead the MDC2 effort.

This final paper completes the series of focus areas that link together the organizational, developmental, and conceptual elements of where I will focus as your Chief for the remainder of my tenure – joint warfighting excellence. Tying it all together:

- **Revitalizing Squadrons** resets our most critical warfighting organization and ensures command teams have the tools, training, and guidance to improve in the core elements of a successful command tour.

- **Strengthening Joint Leaders and Teams** ensures Airmen better understand the operational art of integrating air, space, and cyber capabilities with other elements of national power. It also relooks at how we present ready forces to combatant commanders to support their operational plans.
- **Enhancing Multi-Domain Command and Control** provides the concept of operations (CONOPS) and the technological foundation for better situational awareness, rapid decision making, and employment of the force across multiple domains.

All of these efforts will require significant input from the field and active participation and ideas from all levels is encouraged and welcomed. I look forward to working with our Secretary, MAJCOM commanders, leaders from across the Air Force and other services, as well as, leaders from the other stakeholder organizations to advance our multi-domain operations C2 capabilities. As always, I am proud to serve with you.

Fight's on!

  
DAVE GOLDFEIN  
General, USAF  
Chief of Staff

Muir S. Fairchild Research Inform

Digital Collections

Air University—Maxwell AFB, AL

## APPENDIX D

### Summary Table of Findings

Unit	Organization	Leadership	Manpower	OPTEMPO	Morale	Additional Considerations
<b>Cold War</b>						
28 MMS						Mission and Communication
317 TRANSS						Vision and Communication
<b>Post-Cold War/Pre-9/11</b>						
1 CTCS						Process
9 BS						Motivation and Cohesion
<b>Post-9/11</b>						
16 SOS						Combat and Innovation
16 AGS						Combat and Process
<b>Flying Squadrons</b>						
9 BS						Motivation and Cohesion
16 SOS						Combat and Innovation
<b>Maintenance Squadrons</b>						
28 MMS						Mission and Communication
16 AGS						Combat and Process
<b>Support Squadrons</b>						
317 TRANSS						Vision, Communication
1 CTCS						Process
<b>Bomber Community</b>						
28 MMS						Mission and Communication
9 BS						Motivation and Cohesion
<b>Disbursed Operations</b>						
1 CTCS						Process
16 AGS						Combat, Process
<b>6593 TES</b>						
Predicted						Motivation and Process
Actual						Motivation and Process

#### Legend

**Green** – The historical documents directly acknowledge no problems with the factor or there is no evidence of a problem for the factor area

**Amber** – The historical documents acknowledge no problems with the factor area but other evidence suggests otherwise

**Red** – The historical documents acknowledge a problem within the factor area



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